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ME 90 NUMBER 1

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OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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Volume 90 JANUARY 1959 Number 1

Serum Enzymes†

Variations of Activity in Disease of Muscle

LAURENS P. WHITE, *M.D.*, San Francisco

• **In a study of 58 patients with various diseases of muscle or of the neuromuscular system, the serum activity of various enzymes was measured. Abnormal elevation of serum activities of aldolase, lactic dehydrogenase and, to a lesser extent, glutamic-oxalacetic transaminase and phosphohexose isomerase, was an almost constant feature in patients with progressive muscular dystrophy. These elevations were very frequent in dermatomyositis, common in acute cerebral vascular accidents, and rarely seen in other neurological disorders. Abnormal serum activity of iso-citric dehydrogenase was not observed in the course of the present study.**

Supplementary protein feeding of patients with muscular dystrophy had no effect on serum enzyme activity, no consistent effect on urinary creatine excretion and no effect on the strength of the patient or the course of the disease.

Dystrophic muscles from a dystrophic strain of mice showed a decrease in activity of lactic dehydrogenase and aldolase below that of control muscle and an increase of iso-citric dehydrogenase activity. These findings, taken with the differences in serum activities of lactic dehydrogenase, aldolase and isocitric dehydrogenase in the dystrophic animals, support the conclusion that dystrophic animals handle these soluble enzymes in quite different ways.

THIS PAPER presents a summary of experience with multiple serum enzyme activity determinations in patients with diseases of nerve and muscle, particularly muscular dystrophy. It has been known for ten years that patients with dystrophy frequently are found to have abnormally elevated serum activity of certain enzymes.* The physiological studies on this abnormality have led to the assumption that the enzyme abnormality was due to an increased permeability of the damaged or diseased muscle membrane to the enzymes contained within the myofibril.[8,20] Similar abnormalities of serum enzyme activities have been found in patients with cancer, myocardial infarction, bodily trauma and a variety of other conditions.[7,24]

Previous studies in this laboratory have shown that in many patients with cancer the serum enzyme activity abnormalities can be reversed by the administration of large amounts of protein.[26] These cancer patients have also been shown to have excessive urinary creatine excretion. The association of elevated serum enzyme activity and creatinuria in these cancer patients is quite similar to that found in patients with muscular dystrophy.[3,14] It was, therefore, of interest to investigate the effect of similar protein feeding upon the serum enzyme activity of patients with muscular dystrophy.

†This is the fifth in a series of articles on serum enzyme activity.

From the Department of Medicine, Stanford University School of Medicine, San Francisco.

Supported in part by a grant from Muscular Dystrophy Associations of America, Inc., and in part by a grant from the National Cancer Institute, Bethesda, Maryland.

Submitted November 10, 1958.

*References 2, 7, 15, 17, 18, 19, 20, 24, 25.

Van Meter[22] and others[29] reported, on the basis of uncontrolled clinical studies in a few patients with dystrophy, that the oral administration of fairly large amounts of protein hydrolysate resulted in uniform clinical improvement. This form of therapy is based on the supposition that dystrophy may be due to inadequate absorption of protein from the bowel or inadequate protein synthesis by dystrophic muscle, an assumption unsupported by experimental observations. Numerous investigators[5,6,23,31] have refuted Van Meter's clinical conclusions. It was, however, pertinent to study, in our patients with muscular dystrophy who were receiving feedings of protein or protein hydrolysates, the effect of such feedings on muscle strength over a period of time, as well as any effects on the objective measurements of urinary creatine excretion and serum enzyme activity.

We have further measured the serum activities of several enzymes in a large group of patients with muscular dystrophy, dermatomyositis and various neuromuscular diseases, as well as in a very large number of patients with diseases not primarily affecting the neuromuscular system. Much of this material has been presented elsewhere.[24,25,27]

MATERIALS AND METHODS

The patients studied were seen at several medical centers. Most of the children with pseudohypertrophic muscular dystrophy were observed at the Muscular Dystrophy Clinic of Children's Hospital, San Francisco. A total of 58 patients with various diseases of muscle or the neuromuscular system contributed blood for these investigations.

The enzyme activities measured have been: aldolase, lactic dehydrogenase (LDH) glutamic-oxalacetic transaminase (SGOT) phosphohexose isomerase, and isocitric dehydrogenase (ICD). The methods for assay have been described previously.[24,25,30] Urinary creatine was measured by the Jaffe method. All patients receiving Amigen® intravenously (pancreatic hydrolysate of casein) or human serum albumin intravenously had serial hematocrit determinations during the period of administration to estimate the extent of hemodilution, and in none was significant change in hematocrit found.

The six patients with muscular dystrophy who were studied during protein feeding were put in hospital, where they were given diets of relatively constant known composition, and daily 24-hour urine collections were started. Blood was taken periodically for enzyme assay and other measurements. After several days of observation, during which careful muscle testing was performed by members of the physical therapy department, protein supplements were begun. One patient was able to take Amigen by mouth, 100 gm. daily. Three received Amigen intravenously in amounts of 50 to 100 gm. daily. Two patients received human serum albumin intravenously. During the period of protein or protein hydrolysate administration, serial determination of serum enzyme activity was continued, as were measurements of urinary creatine. At the end of the experimental period (four to eight days) muscle testing was again done, and was repeated one month later.

Twenty-seven patients with muscular dystrophy were observed over a long period, and blood was

TABLE 1.—*Serum Enzyme Activity in Patients with Pseudohypertrophic Muscular Dystrophy*

Case No.	Aldolase Units/ml.	LDH* Units/0.01 ml.	SGOT* Units/ml.	Hexose Isomerase Units/ml.	ICD* mμM*/ml.	Urinary Creatine mg./24 Hours
1	23.0	217	69	53		
2	91.5	218	76	50	144	595
3	23.7	319	54	30	318	
4	11.6	170	17	22		
5	28.0	270	101	63	126	
6	12.1	134	14	19		350
7	10.7	145	18	17		625
8	41.5	338	190	71	228	242
9	24.0	645	110	38	132	
10	21.3	211	60	33		136
11	72.0	652	270	91		140
12	15.2	454		18	108	
13	46.4	402		84		
14	79.0	588		84	208	
15	108.0	658		128	288	
16	28.2	391		42		
17	66.8					
18	80.4					
Normal	<9.5	<110	<32	<40	<300	

*LDH = Lactic dehydrogenase; SGOT = Glutamic oxalacetic transaminase; ICD = Isocitric dehydrogenase; mμM = millimicromoles.

TABLE 2.—*Serum Enzyme Activity in Patients with Facio-Scapulo-Humeral Dystrophy*

Case No. & Sex	Aldolase Units/ml.	LDH* Units/0.01 ml.	SGOT* Units/ml.	Hexose Isomerase Units/ml.	ICD* mμM*/ml.	Urinary Creatine mg./24 Hours
1 M	11.7	95	35	21		
2 M	11.5	86	35	11		
3 M	11.2	91	30	25		
4 F	10.8	160		6	264	453
5 F	6.2			40		907
6 M	12.0			21		1796
7 M	99.4					
8 F	7.6					
9 F	21.2					
Normal	<9.5	<110	<32	<40	<300	

*LDH = Lactic dehydrogenase; SGOT = Glutamic oxalacetic transaminase; ICD = Isocitric dehydrogenase; mμM = millimicromoles.

TABLE 3.—*Serum Enzyme Activity Before and After Administration of Dietary Supplementation*

Case No.	Age	Dietary Supplement	Duration	Aldolase Units/ml.		LDH* Units/0.01 ml.		Hexose Isomerase Units/ml.		Urinary Creatine mg./24 Hours	
				Initial	Final	Initial	Final	Initial	Final	Initial	Final
1	5	Albumin, 10 gm./day	4 days	40.0	37.7	574	545	59	81	138	
2	10	Albumin, 15 gm./day	4 days	21.3	23.6	211	322	33	54	136	
3	12	Amigen, 100 gm./day	8 days	35.6	106.8	530	556	32	86	595	339
4	8	Amigen, 100 gm./day	8 days	61.5	46.2	527	511			242	276
5	16	Amigen, 100 gm./day	8 days	6.3	4.5	121	120			301	479
6	43	Amigen, 10 gm./day	8 days	9.1	5.8	129	148			453	584

*LDH = Lactic dehydrogenase.

drawn from time to time for enzyme activity assay. In a few cases, only one assay was done.

Nine patients with dermatomyositis were studied. Two patients were subjected to serial enzyme determinations during the course of treatment with adrenal steroids.

Twenty-two patients with a variety of different neuromuscular disorders were also subjected to serum enzyme assay.

A small group of mice, strain 129, with the genetic pattern dydy, with muscular dystrophy, that were obtained from the Roscoe B. Jackson Laboratory, Bar Harbor, Maine, were studied for the measurement of various enzyme activities in muscle, and the values were compared with those obtained in normal litter-mates with a genetic pattern Dydy. The dystrophic animals were shown to have abnormal activities of various serum enzymes.[16,32]

RESULTS

The values for serum enzyme activities in patients with pseudohypertrophic muscular dystrophy are given in Table 1. From the table it can be seen that no patient had a normal activity of either aldolase or lactic dehydrogenase, whereas normal activities of phosphohexose isomerase and SGOT were seen in about half of the patients. Only one patient had elevated ICD activity. (This patient, a young child, may in fact have had a normal value for a child, since the upper limits of normal in young children have not been definitely determined.)

In the patients listed in Table 1 the range in severity of disease was from mild, with minimal impairment of strength and activity, to most severe, the patients having almost no capacity to care for themselves, decided contracture deformities and being in essentially bed-ridden condition. In many of these patients serial enzyme activity determinations were performed over an 18-month period. There was remarkably little fluctuation of the enzyme levels of most of the patients during this period. Curiously, as the disease progressed, the levels of enzyme activity tended to decrease. The lower values of activity were found either in mild cases, with little impairment of function, or in the most severely crippled, older boys.

Urinary creatine determinations were performed in six of these patients, and the content was abnormally elevated in all.

Seven parents of patients in this group were studied for serum enzyme activities. In none was an abnormal value found for aldolase, LDH, phosphohexose isomerase or SGOT. The mean values were almost exactly the same as the mean values for the normal controls.[7]

Nine patients with the facio-scapulo-humeral form of muscular dystrophy (Déjerine-Landouzy) were subjected to serum enzyme assay, and the results of these determinations are given in Table 2. Normal values for aldolase activity were found in two elderly women. Abnormal LDH activity was found only once, in a middle-aged woman with severe muscle wasting. Abnormal values for SGOT and phosphohexose isomerase were not seen. Three patients had abnormal urinary creatine excretion.

Six patients with dystrophy were studied intensively during the course of dietary protein supplementation. These patients ranged in disability from mild difficulty in climbing stairs to totally bedridden, and in enzyme abnormality from minimum to severe. Table 3 lists the various enzyme activities before and at the termination of the study, together with the duration of treatment and the amount of protein or hydrolysate given. It can be seen that in no patient was the administration of dietary supplements, whether albumin given intravenously, or Amigen given orally or intravenously, followed by significant change in the serum enzyme activity or creatinuria; similarly, in no patient was this treatment associated with any change in muscle strength or function, as measured by objective tests. Two patients reported a transient feeling of increased strength, which could not be verified by increased performance. Chart 1 shows the results of a typical experiment in a young boy with moderately severe disease, who received Amigen intravenously in addition to his regular diet. This child had previously been observed for 13 months as an outpatient, and continuous progression of the disease was noted. The

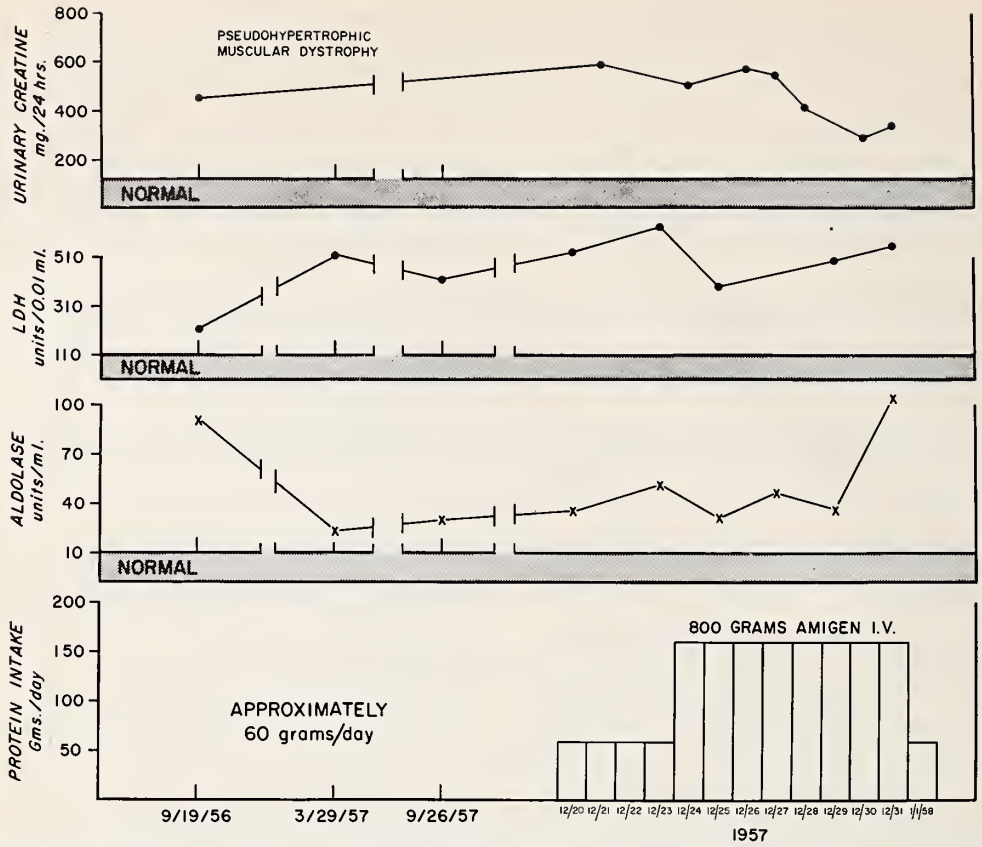


Chart 1.—Serial determinations of serum enzyme activity in a 12-year-old boy with pseudohypertrophic muscular dystrophy. Minimal variation of enzyme activities over a period of one year, and no change during short period of Amigen administration. (LDH = Lactic dehydrogenase.)

TABLE 4.—*Serum Enzyme Activity in Patients with Dermatomyositis*

Case No.	Aldolase Units /ml.	LDH* Units/0.01 ml.	SGOT* Units/ml.	Hexose Isomerase Units/ml.	Urinary Creatine mg./24 Hrs.	Clinical Condition
1	17.2	355	53	44		Moderately severe, generalized
2	4.3	110	9	22		Minimum involvement of arms
3	2.0	116	17	11		Minimum involvement of calves
4	5.3	127	15	42		Mild local involvement
5	24.4	350	80	59		Severe, generalized disease
6		120				Minor disease of hands
7	126.0				3220	Most severe, generalized disease
8	14.9					Moderately severe upper extremity
9	100.0					Widespread severe involvement

*LDH = Lactic dehydrogenase; SGOT = Glutamic oxalacetic transminase.

Amigen had no effect on his strength or ability to move and play, and no late improvement took place in eight months of observation after Amigen administration. There was no consistent change in the serum activity of any of the enzymes measured.

For comparison, Chart 2, taken from a previously published paper, shows the results of a similar experiment in a patient with cancer who received Amigen intravenously. The dietary supplementation with Amigen was followed by an immediate fall of serum enzyme activities to normal.

Nine patients with dermatomyositis were included in the present study, and serum enzyme activities of each are given in Table 4. These patients had varying degrees of muscle damage, from minimal involvement of interosseus muscles to massive damage to most of the large muscle groups of the body. In general the severity of the disease was well correlated with the degree of abnormality of the serum enzyme activities.

Two of these patients deserve special mention. One, a 43-year-old man (Case 7, Table 4), entered

the hospital with fulminating dermatomyositis involving muscles of the neck, arms, thorax, thighs and calves. He had active gastrointestinal hemorrhage and uremia. His serum aldolase activity was sharply elevated; and in spite of renal damage, he excreted 3220 mg. of creatine in the first 24 hours. When massive doses of hydrocortisone were given intravenously his clinical status improved greatly, serum aldolase values fell to normal in two weeks and creatine disappeared from his urine. He appeared to have full recovery and when last observed two years later was back at work. The second patient, a 45-year-old Japanese-American (Case 5, Table 4), entered with a more indolent although severe form of the disease, with diffuse muscle involvement. Elevated activities of aldolase, LDH, isomerase and SGOT were found; and despite the administration of various hormones, including adrenal steroids and testosterone, the serum enzyme values did not change. Clinically the course was one of unremitting disease. It would appear, therefore, from these two cases, that in dermatomyositis the serum activities of glycolytic enzymes may prove to be an accurate representation of the severity of the disease, and may provide an objective means for judging the early effects of therapy.

Twenty-two patients with various neuromuscular diseases were also studied (Table 5). Three patients with traumatic paraplegia were included. One of them, with acute cord damage, whose status was complicated by peritonitis, had a decidedly abnormal LDH activity. Another, who had disease of longer duration, had an elevated aldolase value. The third patient, in whom the disease was of eight months' duration, had normal activities of each of the enzymes measured. One patient with trichinosis was studied late in the course of disease and was found to have minimum elevation of LDH activity. Patients with myotonia dystrophica, amyotonia congenita, myasthenia gravis, parkinsonism, primary

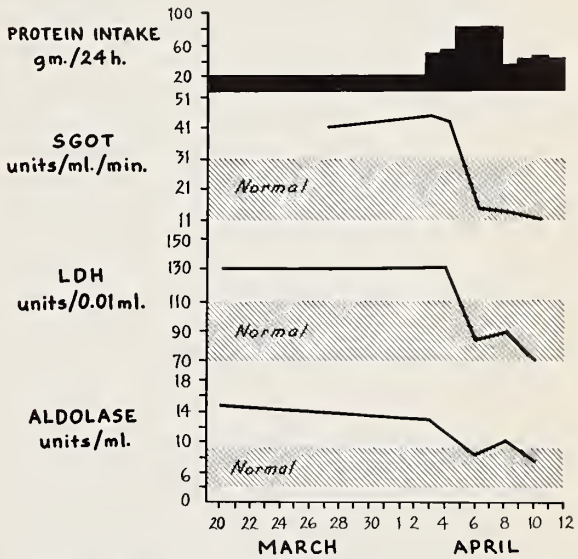


Chart 2.†—Effect of Amigen administration in a patient with cancer who had elevated activity of several serum enzymes. Prompt fall to normal of serum transaminase, lactic dehydrogenase and aldolase after starting Amigen. (SGOT = Glutamic oxalacetic transaminase.)

†Reproduced, by permission, from Ann. N. Y. Acad. Sci. 75:349-356, 1958.

TABLE 5.—*Serum Enzyme Activity in Patients with Various Neuromuscular Diseases*

Case No.	Diagnosis	Aldolase Units/ml.	LDH* Units/0.01 ml.	SGOT* Units/ml.	Hexose Isomerase Units/ml.	ICD* mμM*/ml.
1	Traumatic paraplegia (recent)	28.8				
2	Traumatic paraplegia (old)	7.2	105	26	12	
3	Traumatic paraplegia (new)		650			
4	Trichinosis		128	15		
5	Myotonia dystrophica	5.0		15		
6	Myasthenia gravis	7.2		17		
7	Amyotonia congenita (child)	8.3	186	18	15	
8	Primary lateral sclerosis	5.0	86	9	32	
9	Parkinsonism		93			
10	Cerebellar ataxia (child)	4.2	159	13	20	
11	Freiderich's ataxia	7.2		19		
12	Ataxia (child)	9.1	146	29	20	
13	Ataxia (child)	8.9	76	27	10	
14	Ataxia (child)	7.0	248	12	30	
15	Cerebral vascular thrombosis	7.4		42		
16	Cerebral vascular thrombosis	5.4	175	80	33	
17	Cerebral vascular thrombosis		124		10	
18	Cerebral vascular thrombosis		116		10	
19	Cerebral vascular thrombosis		142			318
20	Cerebral vascular thrombosis		161			204
21	Cerebral vascular thrombosis		131			90
22	Subarachnoid hemorrhage		64			144
Normal		<9.5	<110	<32	<40	<300

*LDH = Lactic dehydrogenase; SGOT = Glutamic oxalacetic transaminase; ICD = Isocitric dehydrogenase; mμM = millimicromoles.

TABLE 6.—*Enzyme Activity Assays in Homogenates of Various Tissues of Dystrophic Mice*

	Aldolase Units/min./mg. Protein 38° C.		LDH* mμM*/min./mg. Protein 38° C.		ICD* mμM*/min./mg. Protein 25° C.	
	Dystrophic	Control	Dystrophic	Control	Dystrophic	Control
Heart	1.4 (1.2-1.6)	1.5 (0.9-1.9)	14.6 (9.6-18.9)	13.9 (10.8-18.3)	105 (86-124)	116 (101-126)
Skeletal muscle	4.4 (4.3-4.5)	6.0 (5.1-6.7)	23.4 (16.0-27.5)	35.8 (26.0-45.5)	13.3 (13.3)	10.9 (3.5-19.2)
Liver	0.8 (0.8)	0.5 (0.5-0.6)	14.8 (5.0-19.2)	13.5 (13.1-13.8)	88 (68-108)	69 (17-108)

*LDH = Lactic dehydrogenase; ICD = Isocitric dehydrogenase; mμM = millicromoles.

lateral sclerosis and various forms of cerebellar ataxia were found to have activities within the normal range. (The few apparently elevated LDH values were in children, in whom LDH activities of this magnitude are normal.) Eight patients with recent cerebral vascular accidents had serum enzyme determinations. LDH activity was abnormal in six of seven and phosphohexose isomerase activity was elevated in the two patients in whom it was measured; no abnormal values for aldolase or SGOT were found. One patient had minor elevation of the ICD activity.

Enzyme determinations on homogenates of tissues of dystrophic mice of strain 129, with genetic constitution dydy, were compared with those of littermate controls, Dydy. These values were also contrasted with those of C57 Black/dba hybrid animals. Lactic dehydrogenase, aldolase and isocitric dehydrogenase activities were measured and expressed in activity per mg. of protein. Table 6 gives the results. Values for aldolase and LDH were lower in dystrophic muscle than in control muscle, while ICD activities were greater in dystrophic muscle than in control. Enzyme values in the heart and liver of dystrophic animals were more nearly those of the control animals. All of the activities were of the same order of magnitude as those in animals of a different strain.[27]

DISCUSSION

The present data confirm many previous observations of abnormal serum activity of certain enzymes in patients with progressive muscular dystrophy and other muscle diseases.* Patients with muscular dystrophy tend to have decidedly abnormal levels of aldolase activity in serum, with decreased aldolase activity in affected muscles. This appears to be true in dystrophic mice as well, both from the work of others[8,16,32] and from the present report. Similarly, serum LDH activity is uniformly abnormal in patients with severe muscular dystrophy; and there is decreased LDH activity in dystrophic muscle of man and mice.[8,16] Less constant are the abnormalities of SGOT and phosphohexose isomerase. A curious fact is that abnormal serum activity of ICD has not been observed in patients with dystrophy, no matter how severe the clinical disease; normal muscle contains a considerable amount of ICD, and it was of great interest that ICD activity in the muscles of dystrophic mice was higher than in controls. It is apparent that dystrophic animals, or their muscles, handle LDH and ICD in quite different manners.

The six patients with active muscular dystrophy who received dietary protein supplementation in the form of Amigen or human serum albumin showed no clinical improvement either during or after such treatment. In none of these patients was there any significant change in serum enzyme activity during protein administration. It has previously been shown that Amigen and albumin do not have a "nonspecific" inhibitory effect on serum enzyme activity.[26] This failure of albumin or Amigen to alter the levels of activity of aldolase, LDH or isomerase in the serum of patients with dystrophy is in contrast to the observation in cancer patients that such protein supplements may frequently produce reversal of abnormal serum enzyme values to normal.[26] It has been suggested that the cause of serum enzyme abnormality in many patients with cancer is muscle wasting due to inadequate nutrition and that the effect of the protein supplements is to provide adequate protein for bodily needs and tumor growth, stopping the muscle wasting which took place to supply these needs. If this explanation is correct in cancer patients, it would appear likely that some other explanation for the serum enzyme abnormality in dystrophy must be sought, for no such reversal of serum enzyme abnormality was produced by protein supplementation. The observations of Zierler[32] and many others are totally in disagreement with any proposition of nutritional origin for dystrophy, such as that proposed by Van Meter.[22]

Our findings of normal serum enzyme activities in parents of patients with muscular dystrophy suggest that there is no genetically transmitted defect of serum enzyme activity. This certainly must mean that the abnormality of serum enzyme activities seen in dystrophic patients is strictly secondary to the primary mechanism of the disease. In numerous other hereditable diseases where enzyme defects have been demonstrated in patients, similar abnormalities have frequently been seen in parents and siblings of affected patients.[10,11,12,13]

*References 1, 2, 4, 7, 9, 15, 17-21, 24, 25, 28.

Our observations on serum enzyme activity in patients with dystrophy followed for long periods without special treatment would indicate that the higher values occur early in the course of the disease, tending to fall as the patient becomes more and more crippled. These observations are similar to those of Schapira and co-workers.[17,18] In cases of roughly the same duration the higher values were generally found in the more severely affected children.

Patients with dermatomyositis showed pronounced variation in serum enzyme activity, the activity being closely correlated with the severity and extent of the disease. In several patients serial measurement of serum enzyme activity proved to be a reliable means of following the effects of treatment, in that patients showing clinical improvement first had a decrease in the serum activity of one or more glycolytic enzymes. In patients not responding to treatment there was no change in serum enzyme activity.

The abnormal activities of serum enzymes in two patients with recent paraplegia presumably reflected the active muscle wasting which was occurring. Similar findings have been seen in acute poliomyelitis.

It was apparent that the rate of tissue breakdown, whether due to wasting disease, infection or some other cause, is of critical significance in the production of elevated serum enzyme activity. The body may be capable of excreting, or inactivating, some excess of these enzymes, but only up to a definite level. When, through more extensive or more rapid tissue damage, amounts in excess of this capacity are poured into the blood, elevated activities result.

The observations on enzyme activities in homogenates of muscle of dystrophic mice, as compared to activities in non-dystrophic litter-mates, were consistent with those reported by Schapira and Dreyfus.[7,8] We, and they, found decreased aldolase and LDH activities in dystrophic muscle, and we noted an apparent increase in ICD in the same muscle. All of these enzymes are freely soluble. Zierler showed that aldolase leaks out of dystrophic muscle at a rate greatly in excess of the rate of leakage from normal muscle.[32] It will be of great interest to learn the rate of leakage of ICD from the same muscle under the same conditions. It is apparent, however, that dystrophic muscle must handle LDH, aldolase and ICD in different ways.

Stanford University School of Medicine, 2398 Sacramento St., San Francisco.

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Operating Room Deaths

An Analysis of Mortality in a Veterans Administration Hospital Over a Ten-Year Period

PHYLLIS F. SHROFF, *M.D.*, Los Angeles

• **A study of operating room and recovery room deaths which occurred during a ten-year period from 1948 through 1957 at one hospital revealed that there were 59 deaths associated with 57,132 surgical procedures.**

Factors which directly influenced the rate of operating room and recovery room death were the age of the patient and the length of operating time. Seventy-five per cent of the deaths occurred in cases in which the operation took longer than one hour. Combined anesthesia techniques may have indirectly contributed to death in some cases.

Complications of operation requiring another surgical procedure sometimes occur. In this series, reoperation proved to be more hazardous in terms of mortality rate than did single operations. This is not surprising for most complications occur in the poorer risk patients.

The operating room death rate steadily increased during the ten-year period studied. This increasing death rate can largely be attributed to the more intricate operations which are being done on poorer risk patients. The use of the curariform drugs had no influence on the increasing death rate.

A STUDY WAS MADE of 59 deaths which occurred in the operating rooms and recovery room at the Wadsworth Veterans Administration Hospital at Los Angeles during the ten-year period 1948-1957. These deaths were associated with 57,132 surgical procedures performed during this time. The study was undertaken to determine whether a common factor or factors might be associated with all these deaths and, if so, whether the knowledge could be used to improve the anesthetic evaluation and management of patients.

A work procedure was developed for coding the pertinent data associated with the deaths of the 59 patients. In the case of each death which occurred in the operating rooms or recovery room, the history and laboratory data as well as the events leading up to the death of the patient were immediately reviewed and documented in considerable detail in a report written by the anesthesiologist assigned to the case. A photostatic copy of the anesthesia record was made and was included in this report. If autopsy was performed, a complete copy of the results was included. Finally, the anesthesiologist summarized this material and reported as to the cause of death and as to whether in his opinion it could or could not have been prevented from a standpoint of improved management of anesthesia. From this report the data used in this study was obtained and transferred to punch cards for purpose of analysis.

One of the chief criticisms of a mortality study of any magnitude has been that the data were gathered from charts which had "grown cold." However, this is not the case here, since all of the facts were gathered and documented at the time of death by the person who gave the anesthetic. The only assumption made in the preparation of this paper is that the material was accurately and honestly recorded.

Of the 59 deaths, 51 (86 per cent) occurred in the operating rooms and eight (14 per cent) in the recovery room. (The recovery room was in existence for only the last four and a half years of the ten-year period of report, and until then patients were returned to the wards after operation. Hence others who otherwise might have died in the recovery room do not appear in the present data. In addition, the recovery room is open only during the hours 8 a.m. to 7 p.m. and patients operated upon during the night who might have died in the recovery room are also not included.)

Twelve per cent of the operations were done in emergency and the remainder were elective. Fifty-eight per cent of the deaths occurred during elective operations. Since the hazards produced by hasty preparation of patients for anesthesia and operation are many and varied, it is not surprising to find that the mortality rate was greater in the emergency operations. However, in our hospital it is considered that there are few pressing indications for immediate operation except for hemorrhage or respiratory obstruction. Therefore, even in emergency situations some time is spent in evaluating the existing conditions and preparing the patient for operation.

Presented before the Section on Anesthesiology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

In general the patients who died in the operating rooms or the recovery room were older than the average age of all the patients on the surgical wards. The patients at the Veterans Hospital ranged in age from 20 years to 96 years. Thirty-eight per cent of all of the patients discharged from the surgical service were of the age group 45-64 years and 19 per cent in the group 65 years or older. In contrast, 48 per cent of the operating and recovery room deaths occurred in patients in the 45-64 age group. Thirty-two per cent of the deaths were in patients who were 65 years or older.

Age was correlated with risk (Table 1). The American Society of Anesthesiologists' classification of risk based on severity of systemic disease was used in this tabulation. All patients who died while having emergency operations were classified preoperatively by the reporting anesthesiologist as very poor risks or moribund. Of these patients, 84 per cent were over 45 years of age. The combined factors of advanced age, poor risk and emergency operation were concomitant with death in a high proportion of cases.

Upon examination of the statistics it was noted that the rate of death increased directly with the patients' age. This is not surprising in light of the facts that one-third of hospital deaths occur in patients having a malignant neoplasm and another one-third in patients with circulatory disease and that these are patients in the advanced age group.

An attempt was made to correlate three factors: The preoperative risk, the staff level of the anesthetist (as a rough appraisal of skill) and an appraisal of whether death could have been prevented. (See Table 2.) Whether the death could have been obviated by better anesthetic management was asked, and, in each case was answered by "yes," "possibly," or "no." An example of a case in which the answer was "yes" was one in which the wrong type of blood was given. In a case of massive pulmonary embolization, the answer "no" was given. "Possibly" the death could have been averted by improved management of anesthesia was the response in one case, that of a diabetic, emphysematous old man with volvulus and gangrene of the small bowel who aspirated vomitus during the induction of anesthesia and 45 minutes later had cardiac arrest. In five cases (8 per cent) it was felt that death could have been averted by improved anesthetic management. Fourteen others (24 per cent) might "possibly" not have died if anesthetic management had been better. The remaining 50 deaths (68 per cent) were considered not preventable from an anesthesia viewpoint. The proportion of deaths deemed "preventable" seems high, but it must be pointed out that deaths were considered as possibly preventable even when the anesthetic complication was a minor one.

Until 1953, anesthesia at the Wadsworth Hospital

TABLE 1.—*Correlation of Operative Risk Factor, Elective and Emergency Factors and Age of Patient, 1948-1957*

	Total		Ages (Years)		
	No.	Per Cent	Under 45	45 to 64	65 and Over
TOTAL—ALL DEATHS	59		12	28	19
PER CENT		100	20	48	32
Preoperative Risk					
Fair	11	19	3	5	3
Poor	8	13	2	5	1
Very poor	23	39	4	11	8
Moribund	17	29	3	7	7
ELECTIVE SURGERY— TOTAL	34		8	17	9
PER CENT		100	24	50	26
Fair	11	19	3	5	3
Poor	8	13	2	5	1
Very poor	15	26	3	7	5
EMERGENCY SURGERY— TOTAL	25		4	11	10
PER CENT		100	16	44	40
Very poor	8	13	1	4	3
Moribund	17	29	3	7	7

TABLE 2.—*Correlation of Risk, the Possibility of Averting Death and the Staff Level of the Anesthetist, 1948-1957*

Preoperative Risk	Total Cases	Death May Have Been Averted By Improved Anesthes. Management			Staff Level of Anesthetist						
		Yes	Possibly	No	Attending or Consultant	Chief	Full or Part-Time Asst.	3rd Yr.	2nd Yr.	1st Yr.	Nurse Anes.
TOTAL	59	5	14	40		1	1		27	28	2
Fair	11	1	4	6					4	7	
Poor	8		3	5					4	2	2
Very poor	23	4	6	13					11	12	
Moribund	17		1	16		1	1		8	7	
ELECTIVE—TOTAL	34	4	10	20					17	15	2
Fair	11	1	4	6					4	7	
Poor	8		3	5					4	2	2
Very poor	15	3	3	9					9	6	
EMERGENCY—TOTAL	25	1	4	20		1	1		10	13	
Very poor	8	1	3	4					2	6	
Moribund	17		1	16		1	1		8	7	

TABLE 3.—*Mortality Correlated with Duration of Operation, Operative Risk and Elective and Emergency Factors*

Preoperative Risk	Total	Duration of Operation: Under 1 Hr.	1 Hr. and Under 2 Hrs.	2 Hrs. and Under 3 Hrs.	3 Hrs. and Under 4 Hrs.	4 Hrs. and Under 5 Hrs.	5 Hrs. and Under 6 Hrs.	6 Hrs. and Over
TOTAL	59	15	16	8	10	4	5	1
Fair	11	1	2	2	3		2	1
Poor	8	2	2		3	1		
Very poor	23	7	5	4	2	3	2	
Moribund	17	5	7	2	2		1	
ELECTIVE	34	8	6	3	8	4	4	1
Fair	11	1	2	2	3		2	1
Poor	8	2	2		3	1		
Very poor	15	5	2	1	2	3	2	
EMERGENCY	25	7	10	5	2		1	
Very poor	8	2	3	3				
Moribund	17	5	7	2	2		1	

TABLE 4.—*Condition Operated Upon and Duration of Operation*

Reason for Operation	Total	Under 1 Hr. No.	1 Hr. and Over No.	1 to 2 Hr.	2 to 3 Hr.	3 to 4 Hr.	4 to 5 Hr.	5 to 6 Hr.	6 Hr. and Over
TOTAL	59	15	44	16	8	10	4	5	1
PER CENT	100	25	75	28	13	18	6	8	2
New growths	22	5	17	5	2	6	2	2	
Infections	4	2	2		1		1		
Perforated viscus due to disease	7		7	3	3	1			
Perforated viscus due to instrumentation	1		1	1					
Resuturing disrupted operative wound	3	1	2	1	1				
Abnormality, repair or reconstruction	15	3	12	4	1	3	1	2	1
Obstruction, bowel	1		1	1					
Other conditions	4	2	1	1				1	
Not operated on*	2	2							

*Death occurred after anesthesia was started and before operation was commenced.

was done by staff members, by first and second year residents and by nurse anesthetists. From 1953 on, it was done entirely by staff members and residents. In only four instances of death was the anesthesia given by staff members or nurses. All other deaths occurred while residents were conducting the anesthesia, but only five of them were considered preventable. No significant difference between first and second year residents was noted when this factor was correlated with elective and emergency preoperative risk. Beginning anesthesiology residents at Wadsworth Hospital are given intensive didactic instruction during the first weeks of training. This phase is followed by very gradually increasing amounts of clinical practice with all agents and methods of anesthesia under close supervision by the staff. The cases are evenly distributed among the residents with little regard to type of operation or preoperative risk, the risk factor being unknown at the time of scheduling. It therefore speaks for the efficacy of this manner of teaching that the death rate of the first year residents was the same as for the second year residents.

The operations in these cases were done in the main by the attending or consulting staff, chief or full time surgeons and fifth year residents. This reflects the seriousness of the risks involved, for at Wadsworth the senior members of the surgical staff perform most of the operations on poor risk patients.

It has been stated that the incidence of morbidity and mortality are statistically directly related to the depth of anesthesia and the length of operation. In the present series the depth of anesthesia could not be measured statistically because of variations which occurred during individual cases. However, the length of operation was accurately recorded and it seemed significant that 75 per cent of the deaths occurred in patients whose operation took longer than one hour (Table 3). Only 39 per cent of the operations in the very poor and moribund risk classes were done in less than one hour. Hingson[2] expressed the opinion that operations of necessity

should be performed if the patient is not *in extremis*. If this premise had been accepted, 29 per cent of all patients in the present series who were considered moribund would not have been operated upon. One way to decrease "unnecessary" operating room mortality would be to limit the operating and anesthesia time for very poor risk patients to one hour.

Seventy-five per cent of the deaths occurred in patients operated upon for new growths, perforated viscus due to disease and abnormality for repair or reconstruction (Table 4). Ten of the 22 patients with new growths were very poor risks or moribund and nine of them were operated upon for more than one hour. All of the patients with perforated viscus were very poor or moribund risks and all had operations lasting more than one hour. Of the 15 patients operated upon for repair or reconstruction of an abnormality, 11 were very poor or moribund risks, six of whom died during the first hour after the beginning of anesthesia and operation. From these data it would appear that both anesthesia and surgical operation must be limited proportionately as the risk to the patient becomes greater.

Of the 57,132 operations performed in the period of this study, 12,000 or 21 per cent were re-operations. That is, many patients had more than one operation. Some of the re-operations were necessary because of complications following the first operation. Twenty per cent of operating or recovery room deaths occurred during a re-operation necessitated because of a complication following a previous operation in this hospital.

Sometimes in cases in which the diagnosis of a surgical condition is in doubt, the attitude of some physicians is that "it doesn't hurt to look." However, complications do sometimes occur as a result of operation, and a first operation is certainly not innocuous if a complication leads to another operation during which the patient dies. It is entirely possible that either the surgical trauma or the anesthetic trauma at the first operation was the cause of the morbidity necessitating another operation. In the present series, five of the 12 patients who died in the operating rooms during re-operation or in the recovery room afterward were hypoxic at the beginning of the final operation. Two had anemic anoxia (hemorrhage), two had anoxic anoxia (pneumonia) and one had stagnant anoxia (heart failure) on arrival in the operating room. The anoxia in these cases could conceivably have resulted from complications of the first anesthetic.

Hemorrhage was a factor in 28 of the 59 deaths in the series. Some of the patients were given blood for the treatment of shock other than that caused by hemorrhage. Patients with hemorrhage received

TABLE 5.—*Operative Risk in First Half of Ten-Year Period as Compared with Second Half in a Total Series of 59 Deaths in Operating Room or Recovery Room*

	1948-1952		1953-1957	
	No. Cases	Per Cent	No. Cases	Per Cent
Risk				
Fair	3	5.0	8	14.0
Poor	5	8.5	3	5.0
Very poor	6	10.0	17	28.5
Moribund	2	3.5	15	25.5
Total	16	27.0	43	73.0

an average of 8.8 units of blood each, while patients who did not have hemorrhage were given an average of 2.1 units of blood each. Neither the condition operated upon nor the factor of elective or emergency operation was related to the number of transfusions done or the amount of blood given.

The anesthesia methods in these cases were classified as to whether they were single or combined techniques. Single techniques were employed in 49 cases and combined techniques in ten. It was thought that death might possibly have been averted by better anesthesia management in 25 per cent of the cases in which a single technique and in 75 per cent of cases in which a combined technique was used.

Because of the worldwide interest in the monumental study of anesthetic and surgical deaths that was reported upon by Beecher and Todd in 1954,[1] it was with a great deal of curiosity, in the present study, that cases in which a curariform drug was used were reviewed. In this study the word *curare* is used to mean any of the muscle relaxants used in this hospital. Curare was used in 7 per cent of all anesthetics administered. The death rate was five times as high in the cases in which curare was used as in those in which it was not. The Beecher-Todd study covered the same time as the first five years of the present study. Therefore, it was thought that a comparison of deaths associated with curare in the first five-year period of our study with the second five years might be profitable. In this comparison the death rate in the curare cases increased by 75 per cent while the death rate in cases in which curare was not used increased 150 per cent. Hence, while the death rate as a whole in the operating rooms and recovery room increased greatly, it was apparent that this increase could not be attributed to the muscle relaxants. When the operative risk factor was reviewed by separate five-year periods (Table 5), it was immediately evident that operations were done on very poor and moribund risk patients during the last five-year period with four times the frequency that they were in the first. One of the big factors, then, which worked to increase the rate of death in the operating room was

the increasing tendency to perform operations under more hazardous conditions than formerly.

Not all the coded material obtained in this study has been presented. Many other factors were analyzed and found to have little significance in relation to the deaths studied. Because the great majority of Wadsworth Hospital patients are male, no data were available as to possible relation of operating room death to sex of patient. There was no meaningful correlation between the patient's preoperative blood pressure and the condition for which he was operated upon.

Wadsworth Hospital, Veterans Administration Center, Wilshire and Sawtelle Boulevards, Los Angeles 25.

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Interstitial Pneumonia

A Pathologic Concept

ROBERT R. WRIGHT, M.D., San Francisco

• **Interstitial pneumonias present a pulmonary inflammatory reaction pattern that is common to a wide variety of noxious agents and disease processes. These include viruses, Rickettsiae, hypersensitivity reactions, the "collagen disease," x-irradiation, uremia, certain chemicals, early histoplasmosis, toxoplasmosis and possibly unknown substances and diseases.**

Interstitial pneumonia is characterized histologically by interalveolar exudate, hyaline membranes, epithelialization of alveolar walls and lack of polymorphonuclear response. Histologic features that aid in differentiating among cases of varying etiology are few.

It is postulated that the basic pathogenic mechanism of the interstitial inflammatory reaction is primary damage to pulmonary capillary endothelium that brings about increased capillary permeability.

INTERSTITIAL PNEUMONIA is a type of inflammatory reaction which can be produced by a wide variety of diseases affecting the lung. Interstitial pneumonia originally was identified as the lesion caused by epidemic influenza. However, more recent studies have shown that other harmful agents, as well as other viruses, may produce a similar pattern of inflammation. The increased recognition of interstitial pneumonia by pathologic study is due mostly to the contemporary use of antibiotics to control the complicating bacterial pneumonias which have in the past obscured the primary pulmonary lesion.

The present study is based upon 35 autopsies in which interstitial pneumonia was proven by microscopic examination, and upon a review of the pertinent literature. It yielded evidence indicating that pneumonia of this type is a non-specific inflammatory reaction and that the basic lesion may be damage to pulmonary capillaries.

The gross characteristics of lungs with interstitial pneumonia are few and they vary considerably; thus the diagnosis is dependent upon microscopic findings. The following are the histologic characteristics: (1) Interalveolar septal thickening due to serous and/or fibrinous exudation, infiltration of mononuclear cells and proliferation of fibroblasts; (2) formation of intra-alveolar hyaline membranes; (3) proliferation of alveolar epithelial cells; and (4) absence of exudation of polymorphonuclear leukocytes. These features may vary quantitatively, depending in some degree on the etiologic and temporal factors.

More than 25 different diseases of various causes are known to produce interstitial pneumonia (see Chart 1). These diseases are either primary diseases of the lung or are generalized diseases with pulmonary manifestations. The histologic pattern of the inflammatory response in the lung is strikingly similar in all of them. In this study only a few differentiating features were detected.

The viral pneumonias[13] occasionally possess morphologic features that may distinguish them from other interstitial pneumonias. These features are the presence of inclusion bodies and abundant multinucleated giant cells or both, as seen, for example, in measles pneumonia and in the rare giant cell pneumonias of infancy. The interstitial pneumonia associated with hypersensitivity reactions,[8] and with various "collagen diseases,"[5] during their acute phases, are similar, showing only two inconstant differential features. These are the occasional presence either separately or together of necrotizing alveolitis (fibrinoid degeneration of interalveolar septa) and necrotizing vaculitis.

The "Masson body," originally thought to be characteristic of rheumatic pneumonia, has been shown to be non-specific.[9] Uremic pneumonia, radiologically characterized by the "bat wing" or "butterfly" configuration, is an interstitial pneumonia,[10] not merely edema. In this disease an exudate of protein-rich fluid, including fibrin, is present within the interalveolar septa between the capillary endothelial cells and the alveolar epithelial cells. In appearance this exudate resembles that of uremic pericarditis, and a similar pathogenic process may be responsible. Histologic characteristics permitting differentiation of uremic pneumonia from other interstitial pneumonias are wanting.

Radiation pneumonia[17] is also an interstitial inflammatory reaction and it, too, is morphologically indistinguishable from interstitial pneumonia due to other causes. Occasionally, however, characteristic

From the Department of Pathology, University of California School of Medicine, San Francisco 22.

Presented before the Section on Pathology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

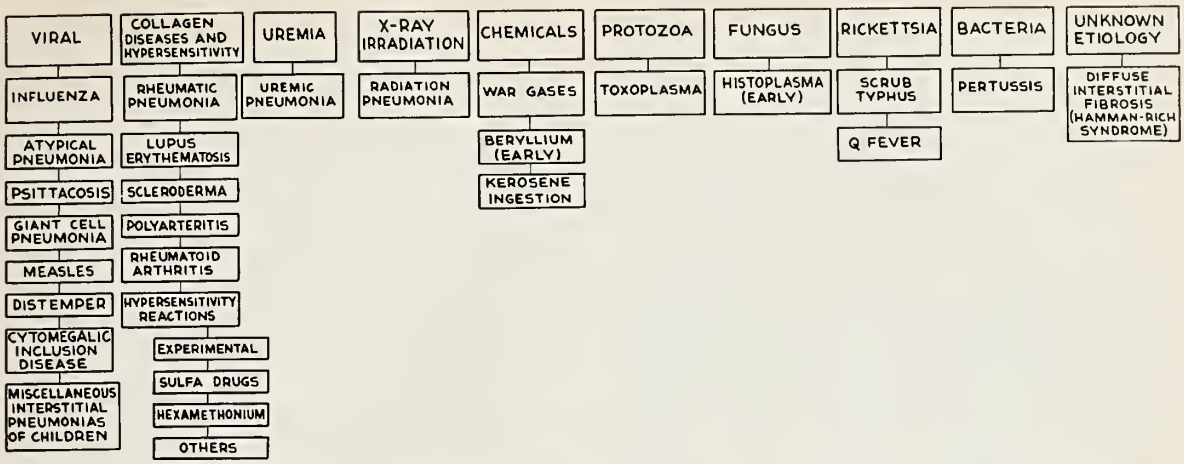


Chart 1.—Different diseases of various causes that are known to produce interstitial pneumonia.

radiation changes in some of the epithelial cells lining the alveoli and terminal bronchioles may be observed (see Figure 1). The remaining, more rare, causes of interstitial pneumonia such as the various Rickettsiae,[1] histoplasma,[2] beryllium[4] and toxoplasma.[12] produce similar pathologic patterns. In these varieties the causative agents can frequently be identified. Inhalation of irritant gases[18] and ingestion of kerosene[16] also produce an interstitial pneumonia. The Hamman-Rich syndrome[15] is an interstitial pneumonia of unknown cause in which there is usually a conspicuous interstitial proliferation of fibrous tissue. The morphologic appearance is, however, not pathognomonic for the syndrome; hence, this disease process should be regarded as a syndrome pending further clarification of etiology and pathogenesis.

Apparently the lung, like other organs, is capable of responding to a wide variety of harmful agents and disease processes in a limited number of ways. The interstitial pattern of inflammation appears to be a non-specific response. It is justifiable to conclude that the cause of an interstitial pneumonia cannot be established from the morphologic features of the inflammatory response alone, but must depend upon identification of the causative agent or upon clinical knowledge of the disease process.

The hyaline membrane, a non-specific feature of interstitial pneumonia, was first described in pathologic studies of epidemic influenza. For a long time it was considered to be typical of that disease. Farber and Wilson[6] demonstrated that the hyaline membrane results from a partial drying of an intra-alveolar protein-rich exudate. When the lungs of animals were insufflated with serum and respirations were maintained, typical hyaline membranes lining the alveoli and alveolar ducts developed.

Proliferation of epithelial cells that line alveolar walls is also a feature of interstitial pneumonias,

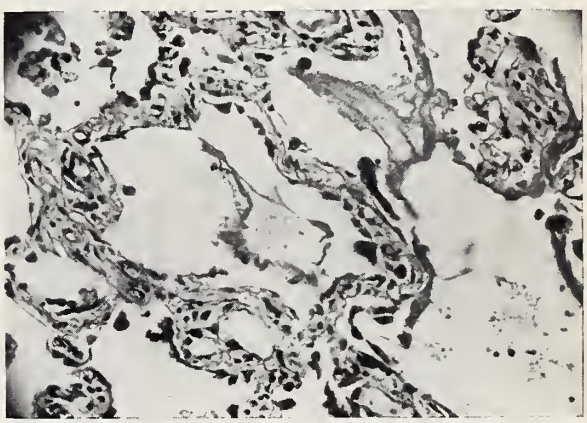


Figure 1.—Specimen of tissue in a case of radiation pneumonia. Note hyaline membranes, interstitial fibrosis and prominent alveolar epithelial cell proliferation. Some of these cells show the degenerative changes seen in radiation reactions. (Reduced from ×100.)

but that phenomenon, too, is non-specific[7] except for rare cases of pneumotropic virus infections in some animals in which this proliferation is extreme.[3] Ordinarily, proliferation of septal lining cells as seen in the interstitial pneumonias appears to be a process of epithelialization of the thickened and rigid alveolar walls. The same process is to be seen in the vicinity of scars, healed cavities and slowly expanding tumors.

Diffuse interstitial fibrosis exemplified by the Hamman-Rich syndrome is also non-specific. Organization of the interalveolar exudate of interstitial pneumonias may occur in a manner similar to organization of lobar bronchopneumonias except that the fibrosis is within the alveolar walls rather than within the alveolar spaces (see Figures 2 and 3).

Because interstitial pneumonia is common to a wide variety of conditions caused by harmful agents and disease processes that affect the lungs, it seems

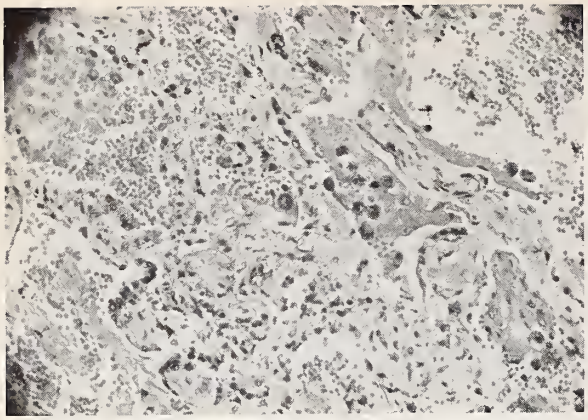


Figure 2.—Specimen of tissue in a case of atypical pneumonia. Note the presence of hyaline membranes, alveolar epithelial cell proliferation, focal hemorrhages and early interstitial fibrosis. (Reduced from ×100.)

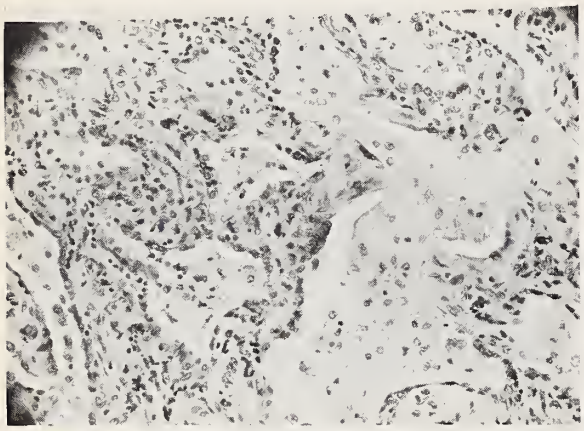


Figure 3.—Sulfa hypersensitivity reaction involving lungs. Note thickened interalveolar septa due to presence of exudate and interstitial fibrosis. (Reduced from ×100.)

likely that the basic pathologic mechanism involved is shared by all of them. In a majority of these instances, there is known to be a particular affinity between the causative agent or pathogenic mechanism and the capillaries and arterioles.

Many of the viruses and Rickettsiae affect the capillary endothelium directly.[1,11] The basic mechanism of the hypersensitivity reaction and many of the collagen diseases is believed to involve small vessels directly.[14] Capillary endothelium is sensitive to x-rays.[17] Gaseous irritants such as chlorine and phosgene injure pulmonary capillaries.[18] Uremia also produces increased capillary permeability.[10] Thus, it seems reasonable to propose that the basic lesion of interstitial pneumonia is damage of the pulmonary capillaries. The damaged capillaries, being more permeable, permit exudation into the interalveolar septa. Some of this exudate may leak into alveolar spaces and, by partial drying, form characteristic hyaline membranes. In the acute severe phases of some of the interstitial pneumonias there is hemorrhage into alveoli due to increased permeability or perhaps actual rupture of the capillaries. Although damage to pulmonary capillaries is present in the lobar and lobular pneumonias of bacterial origin, these pneumonias possess the additional features of the presence of large numbers of polymorphonuclear leukocytes and the concentration of the exudate within the alveolar spaces.

The presence of the hyaline membranes, the outpouring of exudate into the alveolar walls, the frequent intra-alveolar hemorrhages, the lack of polymorphonuclear response, the lining of the thickened alveolar walls with epithelial cells and the organization of the interalveolar exudate to form a diffuse interstitial fibrosis can possibly all be explained on the basis of primary damage of pulmonary capillaries with a resultant increased permeability of the capillary wall.

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The Parotid Gland

A Reinterpretation of Its Anatomic Structure

N. JOHN WILDE, M.D., Fresno

• The parotid gland does not have a constant size and shape and relationship to the facial nerve. It consists of two glandular masses, one lying on the masseter muscle and the other in the pterygoid space to a varying depth. These two masses are connected by a glandular bridge, either wide or narrow, which lies on the posterior border of the mandible. The course of the facial nerve may be through this connecting bridge or it may pass to one side or a branch may pass on either side. In passing forward, the nerve branches may lie wholly within the glandular mass on the masseter, wholly beneath it or partly within it and partly beneath it.

In recent years wide acceptance has been given to the concept that the parotid gland consists of a superficial and a deep lobe connected by a narrow isthmus, all lying on the masseter muscle, but with part of the deep lobe extending into the pterygoid fossa. It is part of this concept that the facial nerve, after leaving the skull, divides into two main divisions, one passing on each side of the isthmus, and then breaks up into five branches which continue forward between the two lobes of the gland. This has been presented as almost an unvarying relationship. In addition, it has been repeatedly averred that, because of this constant arrangement, one can conveniently dissect the nerve along the facial plane between the two lobes of the parotid with ease and little danger of injury.

This concept is based primarily on Bailey's work published in 1941, 1947 and 1948.[2,3,4] In these papers, Bailey revised and reemphasized the work of Gregoire,[12] who first described the bi-lobed character of the gland in 1912, and of McWhorter,[20] who stated in 1917 that the facial nerve passed between a superficial and a deep lobe. This concept has been furthered by reports of other investigators* who, in their texts or their illustrations, make one or more of these points.*

Variations in the manner in which the facial nerve branches and intercommunicates have received careful attention,[18] but there are few papers about the different relationships between the gland and the



Figure 1.—*Left:* Model showing parotid gland lying on masseter muscle as a single mass, not two distinct lobes. The cords, 1-7, represent branches of facial nerve emerging at anterior border of gland. *Right:* Model showing major part of gland (1) lying on the masseter muscle (3) with a lesser part extending into the pterygoid fossa and lying on the internal pterygoid muscle (2). The facial nerve (4) is shown emerging from its foramen.



Figure 2.—Models illustrating that the portion of the gland which curves around the posterior border of the mandibular ramus may be wide or narrow. Note also that the divisions of the facial nerve can pass through the glandular tissue (upper left) or on one side (upper right and lower left) or one branch on either side (lower right).

Submitted July 28, 1958.

*References 5-7, 9, 15, 17-19, 23.



Figure 3.—*Left:* In this model the parotid gland (PG) has been turned back from its position on the masseter muscle (M) and divided through that part lying on the ascending ramus. The nerve (x) enters the gland and stays intraglandular until the branches (Y) exit at the periphery. *Right:* Clinical specimen removed because of malignant disease, showing the inferior surface of the parotid gland. The clamp is beneath the main trunk (X) of the facial nerve as it enters the gland. In this specimen the nerve stayed intraglandular.

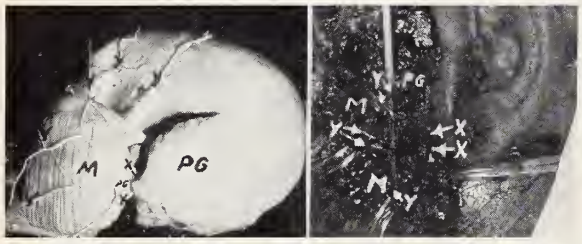


Figure 4.—*Left:* In this model the nerve (X-Y) lies extraglandular through its entire course in the fascia between the masseter (M) and the gland (PG). *Right:* Clinical picture showing the relationship of the gland and nerve as shown in the model to the left. The masseteric portion of the gland has been removed.

nerve.[14,16,22] It is my purpose to point out some of these variations and to emphasize that the pattern is not unvarying.

Several investigators have described different relationships of the gland and nerve.† Each, however, has written with the apparent conviction that his description was the accurate one. It is my purpose to point out that there is no one relationship and that variations do exist.

This study is based on the dissection of 18 parotid glands over the past eight years. I did not find an unvarying relationship between the parotid gland and the facial nerve. In my experience, and that of others as noted, the gland has been like a hamburger patty lying mostly on the masseter muscle but with part of it curving around the posterior border of the ascending ramus of the mandible and extending into the pterygoid fossa (Figure 1). In larger glands this latter part can extend farther medially so that it covers more of the internal pterygoid muscle or more closely approaches the wall of the pharynx. Indeed, Morfit[21] brought out very clearly that a swelling of the lateral pharyngeal wall may be the sign of a tumor of this portion of the gland.

†References 1, 8, 10, 11, 13, 22.

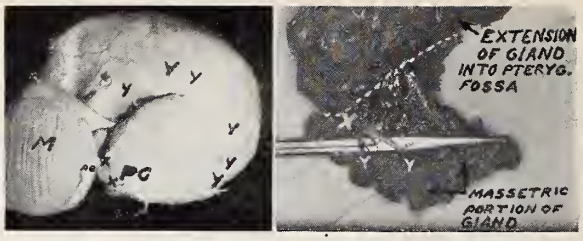


Figure 5.—*Left:* In this model the nerve divisions (X) are extraglandular and then become intraglandular until the branches (Y) exit at its periphery. In the specimen *(Right)* removed for malignant disease, the trunk of the nerve (X) lies extraglandular before the branches (Y) become intraglandular.

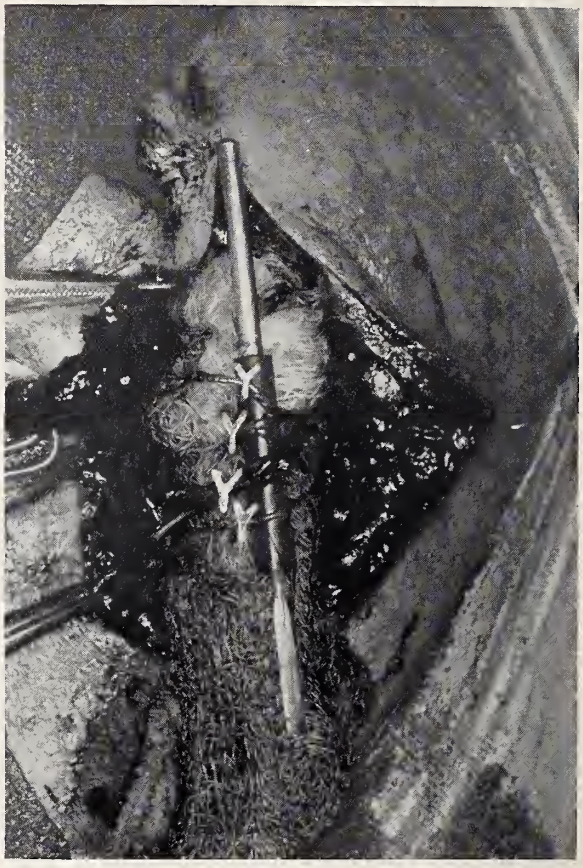


Figure 6.—Dissection of facial nerve showing four main branches (Y).

That part of the gland hugging the posterior border of the ramus may be as wide as the entire gland, or it may be quite narrow (Figure 2). The facial nerve may have various relationships to this part of the gland. If it is wide, the nerve may pierce it (Figure 2, *upper left*); if it is narrow it will pass on one side or the other, or one division may pass on each side (Figure 2, *upper right and lower left and right*).

After the nerve has reached that part of the gland



Figure 7.—Dissection of gland showing nerve with seven branches. The overlying masseteric portion of the parotid gland has been removed, and the nerve is lying on the masseter muscle (M).

lying on the masseter muscle, it may continue forward with one of several relationships: It may stay entirely within the parenchyma of the gland (Figure 3); it may run forward between the gland and the masseter muscle (Figure 4); or it may stay between the gland and the muscle for a varying distance and then pierce the gland and continue its course intraglandularly (Figure 5). Also, I have dissected one facial nerve with four branches (Figure 6) and one with seven (Figure 7). All the others had the usual five branches.

As has been demonstrated by many surgeons, a successful dissection of the facial nerve can be performed if one is aware of its relationship to the parotid gland. However, one should not approach the operation with the conviction that the whole gland lies on the masseter muscle, that it is collar-button in shape and that the branches course forward very conveniently between a superficial and deep lobe which can be separated to disclose, very nicely, five nerve branches. In many instances this might be wrong. Rather, one should begin such a dissection with caution and with the knowledge that the nerve in all or part of its course might lie in the anterior lobe of the parotid and that the number of branches to be found is not always five. Also, the trunk does not necessarily divide about an isthmus but can have the variations mentioned. One should be secure in the knowledge, though, that once the nerve is located, dissecting it is not difficult.

2934 North Fresno Street, Fresno.

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Reducing Gonad Irradiation in Pediatric Diagnosis

HARRY A. BISHOP, *M.D.*, MILO WEBBER, *M.D.*, and BERNARD J. O'LOUGHLIN, *M.D.*, *Ph.D.*, Los Angeles

• **The greatest danger of carcinogenesis and of genetic damage through diagnostic radiologic procedures is in children, whose smaller bodies are more vulnerable and who have a longer life span in which this damage can be realized.**

Film badges placed on the gonad area during radiologic studies indicated widely varying degrees of gonad irradiation from similar procedures. These results emphasize the importance of technique in protecting children from unnecessary exposure. Such exposure can be reduced by greater beam filtration, use of higher tube potentials, careful beam collimation and centering, closer coning and shielding of the gonads. A new film tested reduced exposure time by 50 per cent. Further reduction was obtained by high-speed screens.

A most important measure is avoidance of unnecessary, repetitious and undiagnostic studies.

Fluoroscopy should be avoided if possible. If not, the operator must dark-adapt his eyes, use the smallest possible current, the narrowest beam, and the shortest exposure time. Image intensification promotes these aims.

Modern equipment, properly shielded, assures against unsuspected exposure.

ALTHOUGH CLINICAL radiologic study causes no more radiation to our population than do natural sources, it is still by far the largest artificial cause of ionization of human genes. Every radiologic operator is responsible for the quantity of radiation he is adding to the background and for the hazards he thereby occasions. A review of current literature, as well as the authors' experience with radiation dose measurement, makes it evident that exposures for radiographic purposes are often greater than the minimum necessary to activate the intensifying or fluoroscopic screen—and this excess is greatest in studies of children.

There seems to be a growing tendency to resort to radiologic solution of almost every diagnostic problem in pediatrics.[6] Most pediatricians want a great number of films and many wish to have their fluoroscopic observations confirmed by a radiologist.[33] Many of the diagnostic procedures requested of radiologists are those that involve large exposures, such as cardiac catheterization, angiocardiography and cinematography.[8] Since children are difficult to position and immobilize and since the equipment used is designed primarily for adults, there is a tendency to irradiate relatively larger portions of the body of a child than in an equivalent examination of an adult.[18] It is not uncommon to see part of the head and much of the abdomen and even the pelvis on chest films of infants. Furthermore, all parts of a child's body are nearer to its gonads than are the corresponding parts in adults, and the gonads are more vulnerable to radiation in children than in adult patients. Children have a longer life expectancy in which to acquire a cumulative exposure, and there is some evidence that immature tissues may be especially sensitive to radiation damage.[10]

Gross tissue changes such as epilation and erythema are not caused by the exposure dosages ordinarily used in diagnostic radiography today, but the possible leukemogenic and genetic effects cannot be ignored. According to Lewis[14] there is no threshold absorbed dose for the induction of leukemia. By extrapolation of animal experimental data, Brues[5] raised many interesting questions about the possible effect of radiation on man with regard to leukemogenesis, aging and other somatic changes. Integral exposure dose seems to be related directly to leukemogenesis. Protective measures here would be especially rewarding. While genetic injury has not yet been demonstrated in man, there is abundant evidence from animal experiments that harmful mutations can result even from low exposure of the gonads to irradiation. Nor does there appear to be a threshold for the genetic effects of radiation; the damage is cumulative, permanent and inheritable. A summary of the evidence for somatic, genetic and carcinogenic effects of radiation in children may be found in a recent review by Robinow and Silverman.[25]

The chief concern, then, in reducing unnecessary irradiation in diagnostic radiology, is with children and especially with protecting the gonads. A number of measurements of gonad doses due to diagnostic x-ray procedures have been published.* Those dealing with children are summarized in Table 1. In comparison with the exposure data shown in the

Presented before the Section on Radiology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

From the Department of Radiology, University of California at Los Angeles School of Medicine, Los Angeles.

*References 2, 3, 4, 9-17, 24, 27, 28, 31.

TABLE 1.—*Gonad Area Exposure Doses in Diagnostic Radiography of Children (in milliroentgens)*

	Age Group					
	0-2 Yr.		2-7 Yr.		7-11 Yr.	
	Sex					
	M	F	M	F	M	F
Chest, posteroanterior[8]	0	2	0	0	0	0
Chest, posteroanterior[11]*	5					
Chest, posteroanterior[31]†			0.2	0.06	3.3	3.3
Chest, lateral[31]			0.5	6.0	0.15	6.0
Skull, basal[8]	1	1	0	0	0	0
Skull, lateral[31]			0.01	0.025	0.006	0.02
Skull series[31]					0.4	0.25
Abdomen, anteroposterior[8]	150		310	130	250	240
Abdomen, anteroposterior[31]			82	46	240	95
Lumbar spine, lateral[8]	800	300	500	1200	300	730
Lumbar spine, lateral[31]			190	110	145	180
Lumbar spine series[31]			270	160	300	250
Pelvis, anteroposterior[8]	160	90	280	140	700	300
Pelvis, anteroposterior[31]			90	50	120	50
Hip, anteroposterior and lateral[31]			180	100	570	200
IVP[11]	500	300	1008	678	1520	1384
IVP[31]			330	180	1000	370
IVP[12]‡					654	706
Gastrointestinal series[11]	220		496		220	
Gastrointestinal series[31]			32	96	50	185
Barium enema[11]	450	400	700	455	900	800
Barium enema[31]			36	96	64	220

*Reference 11: Measurements in phantoms of size corresponding to ages 3 mo., 3 yr. and 6 yr.
†Reference 31: Measurements in phantoms of size corresponding to ages 3 yr. and 10 yr.
‡Reference 12: Measurements in children.

table, the average gonad exposure from natural background radiation is in the neighborhood of 100 milliroentgens per year and the "doubling dose"—that is, the amount that would double the spontaneous mutation rate—is estimated to be in the range of 40,000 to 80,000 milliroentgens for humans.[20,22] The "permissible" occupational exposure is now set at 100 milliroentgens per week.

Purpose of Measurements

One purpose of making gonad dose measurements is to evaluate the genetically significant gonad exposure-dose (G_m) to a population from medical exposures to ionizing radiation. As defined by a study group[10] of the International Commission on Radiological Units and Measurements and the International Commission on Radiological Protection, this value, G_m, is the summation of the product of the average annual gonad dose D_i, received by each person in age group "i", multiplied by the child expectancy, P_i, of the age group, multiplied by the number of individuals N_i, in the age group, divided by the expected number of offspring of the population:

$$G_m = \frac{\Sigma D_i \; P_i \; N_i}{\Sigma \quad P_i \; N_i}$$

The international commissions can apply data collected by these and other measurements, with the demographical material above, to the solution of this problem.

STUDY OF EXPOSURE DOSAGE

Virtually all previous exposure-dose studies have been made on tissue-equivalent phantoms by means of air-chamber roentgen meters. At the UCLA Medical Center the authors attempted to measure the actual irradiation incurred by children through roentgenography. For seven weeks all children under the age of 12 years thus examined were badged with small sensitive dosimetry films. One film was attached to the skin where it would lie in the central beam; another was placed on the scrotum or near it or on the skin of the upper medial anterior thigh. (The films were attached according to prescribed method by the technician making the exposures.) The films were calibrated against a standard (Victoreen 250-milliroentgen) ionization chamber with approximately the same quality of radiation as that used in each case. The optical density (darkening) of the film badges when developed was measured by densitometer against that of control films exposed to radiation of known quantity and quality. Chart 1 shows a typical relationship between optical density and exposure dose for a film of the kind used in this survey. By using films of two different sensitivities (Dupont 555 and 606) it was possible to measure doses ranging from 0.5 to 10,000 milliroentgens. The films were found to be reliably reproducible. Error due to increased wave length of scattered radiation and to the varying angles of incidence of this radiation on the film is small enough to be

ignored. The values that were obtained by this method are shown in Table 2.

Gonadal irradiation by fluoroscopy was similarly measured, although, as in earlier studies,[4] the estimate of central beam dose was made with an ionization chamber placed on a child-sized Masonite® phantom. The results are shown in Table 3.

The actual exposure dose to the gonads of the children was lower than the skin badges indicated, for radiation of the kind used in routine studies (66 kilovolt peak, half value layer 2.9 mm. aluminum) loses about 25 per cent of its surface intensity at a tissue depth of 1 cm. Thus the actual dose to the gonads of a small boy is probably about 75 per cent of the skin dose. Nevertheless, the values given for "gonad area" are only a measure of exposure on the upper inner anterior thigh; they are probably lower than the gonad dose and probably increase or diminish in the same proportion. In general, the findings in this study suggest a lower gonad dose than was reported by earlier investigators. As was anticipated, the highest central-beam exposures were incurred by fluoroscopy, which resulted in an average skin dose of 5700 milliroentgens per minute. The image intensifier, however, provided good visualization at a rate of only 850 milliroentgens per minute.

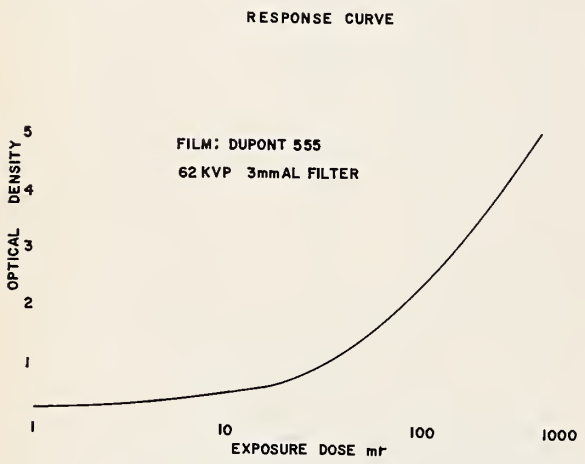


Chart 1.—Relationship between optical density and exposure dose of film badge used in study of gonad area skin dose.

Studies of the hip, the urinary tract and the gastrointestinal tract gave widely varying results (Tables 2 and 3). Some slight doses represented only scatter, while others were so large that the gonad area must have been near the primary beam. It is probable that the larger doses in these cases could have been greatly reduced by proper attention to beam centering, to closer coning or to gonad shielding. These are the types of examination in which careful attention to technical details may reduce the gonad dose by as much as nine tenths without compromising the quality of the roentgenogram. These precautions are of less avail in studies of the lumbar spine and pelvis, which should never be made unnecessarily or repetitiously.

As would be expected, examinations of the chest and of the skull consistently caused little gonad irradiation—slight in comparison with the unavoid-

TABLE 2.—*Radiation Doses with Typical Technical Factors* in Roentgenographic Studies of Children Under 12 Years of Age (University of California at Los Angeles)*

	KVP†	MAS†	T.F.D.† Inches	Number of Exposures	Skin Dose (milliroentgens) Central Beam Average	Gonad Area Average	Gonad Area Range
Chest, posteroanterior	66	6	72	1	8.0	<0.5	<0.5-0.7
Chest, posteroanterior and lateral	66-74	6-13	72	2	23	0.8	0.5-1.3
Heart series	66-74	6-13	72	4	42	2.6	0.7-5.7
Skull	64-74	25	40	4-6	426	1.2	<0.5-3.5
Abdomen, anteroposterior	66	20	40	1	80	36	4.4-95
Intravenous pyelogram	66	20	40	3-7	226	104	3.9-370
Hip	74	25	40	2-3	187	141	6.6-380
Lumbar spine	68-84	20	40	5	2050	40	30-46
Cardioangiography	90	8	33	36	3100	0.7	0.5-0.9

*Filtration: 3 mm. aluminum.
†KVP = Kilovolt peak; MAS = Milliampere seconds; T.F.D. = Target film distance.

TABLE 3.—*Radiation Doses with Typical Technical Factors in Fluoroscopic Studies of Children Under 12 Years of Age (University of California at Los Angeles)*

	KVP*	MA*	T.S.D.* Inches	Dose Rate at Skin (mr*/min)	Exposure Time (min.)	Skin Dose (milliroentgens) Central Beam	Gonad Area Average	Gonad Area Range
Gastrointestinal series	70	3	18	4200	5	21,000	32	2.8-62
Barium enema	70	3	18	5700	5	28,500	127	27-380
Cardiac catheterization	80	1	18	850	10	8,500	5.3	0.5-22

*KVP = Kilovolt peak; MA = Milliamperes; T.S.D. = Target skin distance; mr = Milliroentgens.

ably high doses received in studies of the pelvis and lumbar spine. Only in association with skull studies did the present investigation indicate a higher gonad dose than was noted in previous surveys—possibly because grids were used and because five exposures were made routinely.

As shown in Tables 3 and 4, the gonad area receives a comparatively small dose in cardiac catheterization (although this is a fluoroscopic procedure) and in cardioangiography—possibly because the radiologist is more careful in these procedures. Table 4 shows the difference in gonad doses from heart studies according to body size (age group). In general the larger children required a stronger central beam and therefore received more scatter and more gonad irradiation, but in several cases infants received a stronger gonad dose from the same examinations, as might be expected with a closer central beam causing more scatter and with the greater difficulty of centering and coning for an infant.

TABLE 4.—*Effect of Body Size on Central Beam and Gonad Area Irradiation in Roentgenographic Heart Studies

	Age		
	0-2 Yrs. (milli-roentgens)	2-7 Yrs. (milli-roentgens)	7-11 Yrs. (milli-roentgens)
Central beam dose	34	41	68
Gonad area dose	1.1	2.9	3.3

*Posteroanterior, lateral, and both oblique views.

TABLE 5.—*Reduction of Gonadal Irradiation in Children Through Use of High-Speed Roentgen Film*

Chest Film, Posteroanterior and Lateral Views	Old Film (milliroentgens)	New Film (milliroentgens)
Central beam dose	26-60	15-29
Gonad area dose	1-3	0.5-1.3

During this investigation a more sensitive roentgen film giving the same picture after a shorter exposure was put into general use in the radiology department. Comparison of the two films for chest examination of children (Table 5) indicates that the new film permits a reduction of gonad dose by 50 per cent. The difference in film sensitivity is plotted in Chart 2 for different thicknesses of aluminum. At all thicknesses of the standard aluminum wedge, the old film required more than twice as much exposure for the same degree of darkening.

Chart 2 also shows (curve number 3) the decrease in exposure—about 20 per cent—made possible with a high-speed screen.

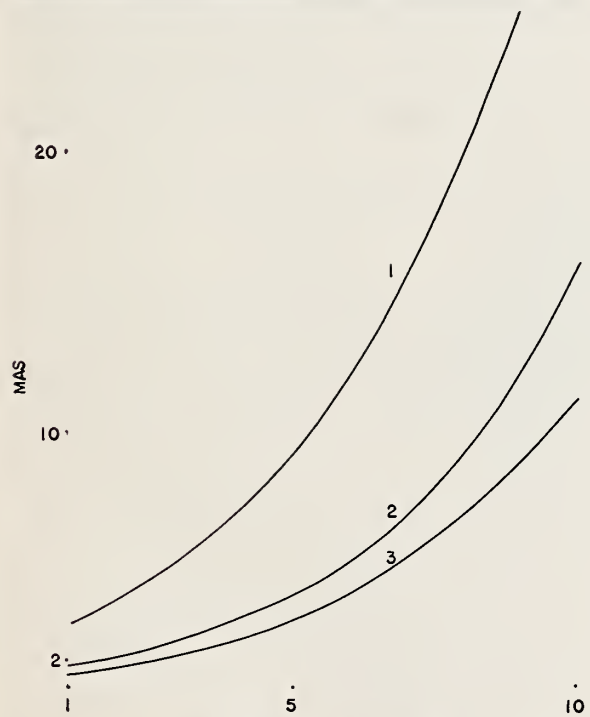


Chart 2.—Exposure in milliampere-seconds (MAS) necessary to produce the same film darkening as the roentgen beam is attenuated by increasing thickness of aluminum is plotted for: 1. "old" film with par-speed screen, 2. "new" film with par-speed screen and, 3. "new" film with high-speed screen. Factors: 66 KVP, 72-inch TFD, 25 ma. Optical density represented by these curves is 0.74.

MEASURES FOR REDUCING GONAD IRRADIATION

A review of gonad dose measurements reported from medical centers throughout the world brings out a wide range of values obtained for each type of examination. Certainly there are a multiplicity of technical factors involved in the reproduction of a given procedure. Nevertheless, the higher doses reported in some studies could have been reduced by adjustment of technique. Indeed, nearly all the investigators who have tried to measure gonad doses have reemphasized techniques by which such doses could be significantly reduced.

As Trout and co-workers,[30] Martin[17] and Ardran[1] have indicated, additional beam filtration effectively reduces skin dose. In examination of the pelvis, for instance, an additional 3 mm. of aluminum reduces the skin dose to less than one-third and the dose to the ovaries to about two-thirds of the unfiltered dose.[31] For this reason the National Committee on Radiation Protection[21] recommends a total filter in the useful beam equal to at least 2.5 mm. of aluminum.

Webster and Merrill[31] noted that when the gonads are outside the direct beam, reduction of cone size (from 20 inches to 12 inches) causes a reduction of more than four-fifths in the ovary exposure dose. The gonad dose due to scatter from the trunk of the body increases by a factor of about three when the

central beam is moved 2 inches near the gonads.[31] Attention to cone size and centering can thus result in desirable dose reduction. The continuously variable rectangular diaphragm helps to control beam size. But the shape of a cone is not as important as the area it covers. All roentgenograms of children should be scrupulously delimited, as evidenced by "cone cuts" at the corners of the films.[23]

Higher tube potentials, giving greater penetration, permit a reduction in milliamperes per second with equivalent film exposure; skin dosage is reduced thereby, and in most instances the depth dosage is significantly reduced also.[29] For example, in an anteroposterior view of the pelvis an increase from 70 KVP to 100, with corresponding reduction in current or time, reduces the gonad dose by 50 per cent in the male, 30 per cent in the female.[31]

Lead shielding, where practicable, may also greatly reduce the gonad dose. Testicular shielding, as advocated by Ardran[3] for studies that would expose the testes to the primary beam, can reduce the gonad dose by a factor of 20 or more.

The use of grids significantly increases the required exposure, but they are not generally needed for studies of children.[23]

High-speed intensifying screens permit further reduction of the exposure needed for clear films (Chart 2). Although finer detail can be obtained without the screen this advantage should not often be needed in most cases for studying the smaller bodies of children, and it is often nullified by the child's moving during the longer exposure. The value of these screens and of high-speed film has been discussed above.

Aside from these technical considerations, one of the largest factors in the overall reduction of unnecessary radiation exposure is the *reduction of nondiagnostic and unnecessary radiologic examinations.* This is particularly true of "routine" fluoroscopic examinations which are often useless and always most productive of radiation exposure.[33]

Although Billings and co-workers[4] recently minimized the contribution of fluoroscopy to the total gonad dose, it is now apparent that the largest exposures are incurred through this medium, as many other investigators have testified, with emphasis on the hazard to children.[6,7,16,26] Lefebre and Serra[13] have estimated the skin dose in standard digestive tract studies of children at 70,000 milliroentgens or more, and that for specialized fluoroscopic examination at twice that amount in the central beam. It appears that fluoroscopy of children is rather common and even routine, in some communities, for study of the chest and skeleton in health examinations.[6] A survey by Zavon and Valaer[33] revealed that more than half of the fluoroscopes used by the pediatricians queried had outputs above the maximum of 10,000 milliroentgens per minute recommended by the National Council for Radiation Protection. None of the machines that were examined had filters equal to the recommended 2.5 mm. aluminum. Many of the pediatricians surveyed did not even dark-adapt their eyes before fluoroscopy and most used far higher currents than are necessary in studies of children. These abuses are consistent with the fact that most of the fluoroscopes in use today are in the hands of persons who have had no formal training in radiology. Certainly fluoroscopy should never be used when the same information can be obtained roentgenographically. One minute of fluoroscopy with the beam limited to one-half of the chest area at a skin dose of 10,000 milliroentgens per minute is equivalent, in irradiation, to 600 chest films.

When fluoroscopy of children is necessary, adequate dark adaptation (20 to 30 minutes) permits use of weaker current and thus reduces irradiation. Short exposures of a tenth to five-tenths of a second give as much information as longer ones. Limitation of the field reduces not only the integral dose but also the scatter. Shutters must be liberally used and the aperture should never exceed the size of the observed area. The tube should be at least 15 inches from the table top. When available, image intensifiers should permit a further significant dose reduction, especially if attention is paid to reducing total exposure time. Modern equipment, with well-protected tubes and tables, assures against unsuspected irradiation.

Department of Radiology, University of California at Los Angeles School of Medicine, Los Angeles 24 (Bishop).

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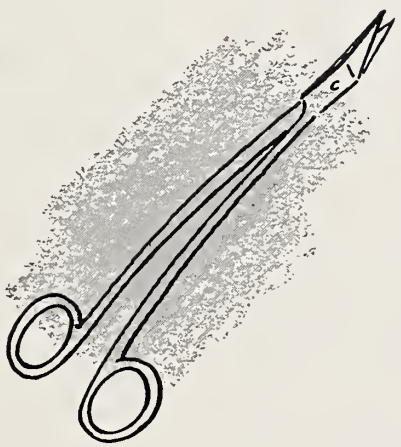
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Use of Methocarbamol in Orthopedics

WILLIAM B. LEWIS, *M.D.*, Riverside

• A new skeletal muscle relaxant, methocarbamol, was used in the treatment of 38 patients with a variety of severe neurological disorders and skeletal muscle spasm states.

Eighty-two per cent of the patients studied obtained a beneficial result ranging from excellent to fair.

Mild side effects such as drowsiness were observed in five patients, mild weakness in three patients and excessive perspiration in one. In two of the five patients who complained of drowsiness, it disappeared upon reduction of dosage and did not reappear when original dosage was reinstituted.

FOR MANY YEARS, the problem of reflex skeletal muscle spasm has been a troublesome one in the fields of orthopedics and physical rehabilitation. There are three possible approaches to the treatment of this state: First, blocking of the afferent impulse by either intramuscular or perineural injection of a local anesthetic agent; second, the interruption of the transmission of information across the internuncial neurons in the spinal cord; and third, rendering of the motor end-plates temporarily incapable of transmission of the nerve impulse to the muscle. Of these possibilities, the second has for many years been most favored and numerous agents have been introduced in an attempt to achieve this end. Unfortunately, either they have been ineffective or the side effects have been pronounced.

In 1950, Ginzel[6,7] reported the efficacy of glyceryl guaiacolate as a skeletal muscle relaxant. However, the duration of its action was too short to consider it an effective therapeutic agent. Other studies by Burger[1] and Richardson and co-workers[12] indicated that the monocarbamate ester of mephenesin had a longer duration of action. In 1953, the carbamate of glyceryl guaiacolate (methacarbamol*) was synthesized and was found in pharmacological testing[8,9] to retain its potent skeletal muscle relaxant powers and at the same time proved to be sufficiently long acting to recommend its use clinically.

Pharmacological studies conducted on the carbamate of glyceryl guaiacolate demonstrated its main locus of action to be at the internuncial neurons of the spinal cord,[8,9] although it is also apparent from some of the pharmacological data that there is a supraspinal effect. This, however, would appear to be of a mild type.

Early investigators reported results from clinical trials[3,4,10,11] which indicated that further extensive study was warranted. Cailliet[2] found methocarbamol to be an excellent skeletal muscle relaxant in the treatment of 14 cases of acute lumbar disk herniation, nine cases of acute ligamentous lumbosacral strain, eight cases of shoulder pericapsulitis, 14 cases of cervical tension state, three cases of herniated cervical disk and two cases of acute torticollis. He also reported favorable results in decreasing the rigidity in two cases of Parkinsonism. No patient in the series had untoward side effects.

The present communication is a report on the use of methacarbamol in a series of 38 cases.

With regard to assessing the results of drug therapy, it should be emphasized that voluntary muscle disorders are reflections of disease states which may be classified into three major categories: (1) Acute skeletal muscle spasm due to strain, the muscle itself being the source of pain; (2) pathologic change involved in herniation of the nucleus pulposus, in which the basic difficulty is radiculitis with spasm reflexively referred from pressure on the spinal nerve roots; (3) disorders of motor function either due to spinal cord or supraspinal involvement. These broad definitions of disease involvements are emphasized because the response to drug therapy tends to vary so much in chronic neurological diseases. The series here reported upon was made up of five patients in the first category, two in the second and 31 in the third.

Rodriguez-Gomez and co-workers[13] observed that following administration of zoxazolamine and chlorpromazine the spasticity of spinal origin responded much better than that initiated from cortical or sub-cortical areas. Gibson and co-workers,[5] using the double blind technique, noted no amelioration of skeletal muscle spasticity of spinal cord origin following administration of these drugs. It is apparent, therefore, that the complexity of disordered neurophysiology in function and the method of study complicate the evaluation of drugs in patients with chronic neurological diseases.

The present study, which was initially of a browsing nature, was entered upon with a significant degree of skepticism as to the benefits to be obtained from the use of methocarbamol. It was a pleasant surprise to observe the improvement in patients,

*Methocarbamol is the generic name of Robaxin® manufactured by the A. H. Robins Company, Inc., Richmond, Virginia.

Submitted July 14, 1958.

several of whom were beyond assistance as far as physical therapy measures were concerned. The study was then amplified to include a wide variety of disorders with the objective of determining what change if any would be wrought in total functioning capability. In all, 38 patients were treated, for the following conditions: Multiple sclerosis, torticollis, congenital spastic right hemiplegia, acute and chronic herniated nucleus pulposus, paraplegia following neoplastic compression at T-3 with surgical removal, acute disseminated encephalomyelitis with paraplegia, residual paralysis of poliomyelitis, severe degenerative arthritis of the hip, amyotrophic lateral sclerosis, lower motor neuron lesion, epilepsy (petit mal), visual impairment and paraplegia secondary to postoperative neuroma removal and/or subsequent arachnoiditis.

The response obtained with methocarbamol was judged on a clinical basis by comparison of observations by the author, two physical therapists and the attending nurse. The patients served as their own controls since they had been observed for periods ranging from weeks to years before the drug was given. If the relief was dramatic, the response was graded as "excellent." If the response was obvious but still lacked the outstanding nature of the first group, it was graded as "good." Where the effect of the drug was to give relief of a recognizable nature but not as pronounced as in the first two groups, it was adjudged "fair." If there was no noticeable response, "negative" was used. An excellent response was obtained in 21 per cent of the cases, a good response in 45 per cent, a fair response in 16 per cent. In only seven cases was the result negative.

In adults, the dosage varied from 3 to 6 gm. a day, and in children proportionately smaller doses were administered.

The following case is typical of those in which the response was excellent.

The patient was a 42-year-old woman with paraplegia following neoplastic compression at the third thoracic vertebra treated surgically.

In 1951, the patient noted buckling of the left knee, which caused her to fall. She also observed poor coordination of the right lower extremity with sharp pains and muscle spasm in the left hip and below the knee on the left side. She was first treated as an outpatient and then admitted to hospital on April 20, 1955, with a diagnosis of spinal cord tumor. At operation it was removed from the level of the third and fourth thoracic vertebrae. After recovery the patient still had decided weakness and severe spasm in the lower extremities.

Upon physical examination the upper extremities were normal. In the lower extremities paresis of all muscular groups was noted, with mild heel-cord and toe extensor contractures on the left side. Babinski's sign was present. There was fair hip flexor power with some extensor thrust on the left side. Cutaneous stimulation on either side of the body from the waist down caused severe, painful mass reflexes.

Methocarbamol was given in a dosage of two tablets (0.5 gm. each) four times a day for a total daily dosage 4 gm., and by the fourth day it was noted that the spasms were fewer and less severe. After three weeks of treatment, the dosage was increased to three tablets four times a day (6 gm.) and was continued at that level for a period of more than two years at the time she was last observed. During that time, the patient was able to have her legs passively extended and noted a return of sensation down to her toes. The muscle spasms were decidedly relieved and she was able to extend the left knee actively, to dorsiflex and plantarflex the left foot and to partially flex the left hip without arousing a mass reflex.

No abnormalities were noted in the urine during the period of therapy. The hemoglobin content of the blood was 13 gm. per 100 cc. and erythrocytes numbered 4.5 per cu. mm. Leukocytes numbered 12,000 per cu. mm.—64 per cent polymorphonuclear cells and 36 per cent lymphocytes.

In reviewing the seven cases in which no clinical response was obtained, it was noted that in one of them there was some evidence of a preexisting tightness and muscle contractures with history of a possible previous attack of poliomyelitis in childhood. There were also in this group three cases of multiple sclerosis and one case of probable multiple sclerosis. Another patient who obtained no response had left hemiplegia secondary to a cerebral vascular accident, and she had had complications owing to repeated transient vascular cerebral episodes. Also all muscle groups in the lower extremities showed atrophy. A seven-year-old patient in this group had mild cerebral palsy but there was no spasm associated with it. His ability to coordinate was not improved.

Five patients in the series had mild drowsiness associated with the drug; and in two cases it disappeared when the dosage was reduced and did not reappear upon reinstitution of the initial schedule. Three patients noticed some weakness, and one patient reported excessive perspiration.

6876 Magnolia Avenue, Riverside.

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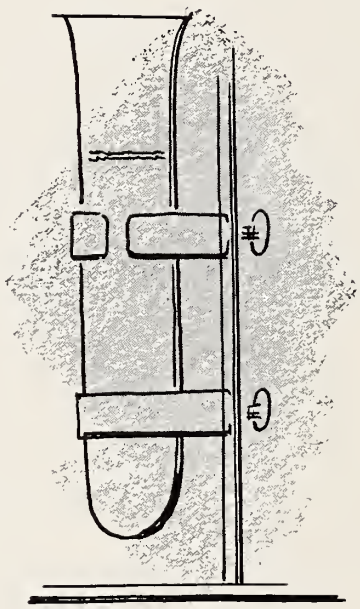
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Psychotherapy of Adolescents

JOSEPH D. TEICHER, M.D., Los Angeles

• Adolescence is a period marked by turmoil due to inner and outer pressures. Adolescent behavior is a way of coping with the many internal, biological changes and faulty control mechanisms. Adolescents have to live up to many social demands, which mostly demand that they grow up. And yet they have considerable doubts about their abilities. In this turmoil of inner and outer pressures, young people, finding it difficult to trust anybody, reject from adults the help they are seeking. The task of therapy is to facilitate the healthy maturation of the adolescent, to help him develop a concept of an independent self with increasing mastery of the integrating part of the personality, which modifies, selects, controls and coordinates inner drives and modifies those in conflict with external reality.

THE FOLLOWING is a brief summary of some of the general considerations of psychotherapy in adolesence, a period roughly from 12 (for girls) or 13 (for boys) to 18 years of age. There are considerable differences in personality structure between an early adolescent (12-14) and the later adolescent (14-16). A third period of adolescence (16-18) is usually one in which the turmoil commonly associated with that period of life begins to subside. Of course, these periods are not clear-cut and are rather hazy delineations. In general, treatment procedure for the early adolescence group is not very different than for younger children, where the emphasis is predominantly on the problems of daily life.

Adolescence is a critical period in the formation and outbreak of emotional disturbances as well as in the resolving of conflicts. It is a physical event, which renders the young person labile, impressionable and introspective. A certain amount of disturbance in this troubled state is normal. Adolescence is complicated by our society's delaying recognition of maturity to a biologically mature organism. This delay may cause many adolescent transitory adjustments to be solidified into the character structure. Adolescence seems to be at its height in the roughly 14-16 age period.

Increased energy and aggressiveness, coping with the intensified sexual drive and the struggles it awakens, the presentation of infantile and childhood conflicts for re-solution, the genuine press for emancipation from parents, which includes a devaluation of the parents in the effort to be freed of dependence, are present. Conflicts concerning complex feelings about the parent of the opposite sex flare up, with important consequences to socialization. Sibling jealousies and rivalries crop up.

Masturbation and masturbation fantasies are a central preoccupation, intensified by the usual extreme preoccupation with one's self. This oft-irritating-to-parents preoccupation with the self is not only a sign of bewilderment but also an attempt to cope with the newly reenforced sexual drive. Controls over emotional life are uneasy—too rigid or too weak. Experimentation with instinctual drives, testing demands of conscience, probing reality, are all sources of anxiety. Rebellious behavior—attacking ethical and moral standards, parental standards—is a phase in the resolution of the ambivalence in the young person's relationships. Peer groups and customs give the adolescent great support and take on great importance. Confusions and contradictions engendered by society and parents add to the turmoil of adolescence.

The multitude of symptoms can best be understood if one keeps in mind the shifting balances between inner drives seeking expression and those functions which have to do with the individual's relationship to his environment (ego strength), occurring in a social setting with peer-influenced behavior patterns, which range from hair styles to dating behavior. It is not without some justification, or desperation, that some forms of adolescent disturbance are likened to an acute psychotic reaction, when the ego seemingly is overwhelmed by instinctual forces.

In considering psychotherapy with adolescents, one must include the many influences other than direct treatment which help to lessen the young person's tension and conflict and include the many environmental factors to which adolescents are subjected. Therapy includes treatment of the educational and vocational problems, too. And, of course, therapy includes the guidance or treatment of the parents, for often it is their attitude which blocks the aggressive and social outlets of the adolescent, thus fostering conflict and revolt.

Parents who are unable to deal with the strength of the newly discovered drive and power of the adolescent, first become anxious and frightened, then confused and finally irritated and angry. Old

From the Child Guidance Clinic of Los Angeles.
Submitted June 25, 1958.

methods of control no longer work; newly devised ones fail. When parents have had difficulty for years in developing a warm, trusting relationship to their child, this difficulty becomes more intense in adolescence. Difficulties become more serious when parents do not care to participate or are not able to participate in the treatment. Nonetheless, working solely with a motivated young person can be quite successful.

Parents usually bring the adolescent into treatment, and any communications by the therapist with the parent are shared with the adolescent. It is often helpful to the young person in his critical evaluation of his parents for the therapist to set his candid, although tactful, opinions alongside those of the parent. The therapist, in essence, is stating that mastery of the self is possible independent of parental reaction. He must avoid being the "good guy" or "parent." in using his prestige to get special favors. This distorts treatment; it becomes an infantile, dependent relationship for the adolescent.

Broadly speaking, the aim of psychotherapy in adolescence is to facilitate the healthy maturation of the adolescent, to help him develop a concept of an independent self with increasing mastery of the integrating part of the personality (or the ego), which modifies, selects, controls and coordinates instinctual impulses and excludes or modifies those that are in conflict with external reality. Psychotherapy focuses on the repetition of past pathogenic experiences *now, in adolescence*. The aim is to effect structural changes that increase tolerance for tension and frustration. Dealing thus with the problems of instinctual demands and external forces requires a most flexible technique. There is no rigid, this-is-it approach to adolescent problems.

Most of the direct psychotherapy of adolescents has as its goal, then, the strengthening of the ego to the point that tension and hostility are reduced and rebellion lessens. It is a striking clinical observation how much of this result can be accomplished merely by the adolescent's feeling entirely accepted by the therapist. The therapeutic situation, of course, is quite different from that in his home where his parents are so conflicted about him; or in school, where because of his lack of motivation to learn and his defiance, he is no longer welcome; or in court, where he is helpless before the law.

The strengthening of the ego has as its goal more than the effecting of a feeling of trust. The therapist learns the pathological or useless defenses which the adolescent has acquired and which have given him a false feeling of strength. The feeling of strength is important to the adolescent; it compensates for feelings of rejection, inferiority or unworthiness. As the adolescent learns why he has developed such defenses, his behavior may change. For example, as he learns that the feelings of hatred ascribed to his parents are distorted, he learns to accept his parents better and is better accepted by them, and in turn by others.

To establish rapport with the adolescent during the first visits is often the only chance for treatment. The emotional stimulation aroused in the first interview often cements a strong desire for continued treatment contacts. Due to the adolescent's rejection of parental figures, therapists are rejected with the same ease as all other adults. Treatment is more easily accepted by patients whose neuroses—such as phobias and obsessions—cause them suffering. But, even these patients may, after a short initial period of cooperation, deny their difficulties and want to drop out. Persons of the "acting out" type reject treatment more vehemently.

An experienced therapist, secure in his ability to help, can quickly sense the many unmet emotional needs in the adolescent, put him at ease and rapidly develop a feeling of trust. The therapist is in a key position, which has its fortunate aspects, for the adolescent needs a real, personalized relationship with an adult to stabilize his self-control, and he readily displaces his relationship from parents to persons in the outside world. Since drawing away from his parents tends to leave him helpless, he hopes the therapist will fulfill his emotional needs, but fears he may not. The inner void created by separation from the parents can only be filled by the emotional experiences which the relationship to the therapist affords. Always the adolescent-therapist relationship, regardless of the track it takes, aims at progressive mastery of the inner drives and outside demands.

For the therapist to make premature and disturbing interpretations—those that hurt pride or self-esteem—or to have an attitude of wholesale permissiveness (wherein the therapist becomes identified with uncontrollable inner drives) provokes negative reactions. While it is easier to get at unconscious fantasies early in therapy than later on, and the fantasies can be more readily interpreted, one must guard against producing chaos. All relationship distortions are dealt with in the present tense and not traced back to infantile origins. The therapist's reasonable, firm, unaggressive actions gradually modify the conscience of the adolescent and increase his tolerances for tension, which growing up demands. The aim is to understand the defenses of the adolescent in all their deceptive manifestations and to strengthen the ego and its functioning.

The adolescent's tendency to action is well known, and where acting out is a serious problem an atmosphere of restrictions is of great help and even a necessity—even placement in a special facility if need be. If the patient continually makes use of

unrestricted behavior as a relief from inner tension. treatment is bound to be empty. Affection in itself will not bring an adolescent close to the therapist. It may do just the opposite; it may suggest the therapist is weak. Firmness may be demanded to gain his respect. An adolescent who feels he can outsmart the therapist usually will have little use for him.

The ability to treat adolescents implies much experience with them, an intimate knowledge of their habits, weaknesses and strengths. Not every adolescent disturbance is equally well treated by the same therapist. The empathy and spontaneous relatedness to the adolescent's feeling of life is much more than mere understanding and insight. It is this empathy which eases treatment contact. The therapist *shares* the young person's emotions and fantasies, but *with a restraint* that helps the adolescent to identify himself with the therapist and hence guides him toward insight, which in turn helps him develop his standards and a sense of self. Adolescence is a time of psychological and social self-finding.

The therapist must be free of anxiety, which he cannot be if he is unfamiliar with adolescents, or if he fears he may be overlooking significant material requiring attention or if real emotional conflicts in his own adolescence have been unsatisfactorily resolved. The problem for every therapist is how limited he may be in the type of patient he can work with by his own personality make-up or life experiences. The easy display of feelings, the ingenuity necessary to make therapy interesting enough to be continued, the abilities to shift from dramatizing to interpretation, from support to demand, from humor to surprise—these are not qualities every therapist possesses, nor can every therapist acquire them.

No one can say that treating an adolescent is not challenging or difficult or rewarding or frustrating or irritating. It is always interesting and requires a flexibility of technique as well as a supple, well enlightened personality applying the techniques. The therapist's tolerance for frustration must be high indeed!

1408 North Vermont Avenue, Los Angeles 27.



Sporadic Goitrous Cretinism

H. DAVID MOSIER, *M.D.*, Los Angeles

• **Five to 10 per cent of cretinism in the United States is due to some congenital enzymatic defect in thyroid hormone synthesis. The clinical signs of hypothyroidism appear in early infancy. Differentiation from athyreotic cretinism is important because the metabolic defect tends to be familial and its presence in the patient's infant relatives should be diagnosed as early as possible. The differentiation is easily made if a goiter is discernible, but if it is not, radioiodine uptake should be measured, for in this condition the uptake is normal or greater. Thyroid replacement is the treatment in either the athyreotic state or the metabolic deficiency.**

The three known defects in thyroid hormone synthesis are (1) failure to oxidize iodine to elemental iodine resulting in failure of all subsequent processes; (2) failure to deiodinate free iodotyrosine, and (3) failure to form iodothyronine although the previous steps are accomplished.

Goitrous cretinism as an endemic condition has almost disappeared since the use of iodized salt has become widespread. Most of the remaining cases are due not to iodine deficiency but to some congenital defect in the synthesis of thyroid hormone. It is important to differentiate these cases from athyreotic cretinism because the defect is familial and the physician can be alerted to detect cretinism early in infant relatives of the patient.

In both diseases, hypothyroidism may be manifest soon after birth, or it may be mild and may cause little brain damage.

Absence of a goiter at birth does not necessarily rule out goitrous cretinism, for in this condition the gland may not become prominent for several years.[10]

Blood cholesterol content, another index of hypothyroidism, is not high in early infancy but may rise if the patient remains untreated.

Two other useful indices of thyroid function are the measurements of protein-bound iodine (PBI) and of butanol-extractible iodine (BEI), but the PBI may be paradoxically excessive in goitrous cretinism and other nonhyperthyroid goitrous conditions[2,4,20] if iodotyrosine or other nonhormonal iodinated metabolites are present in the precipitated serum proteins.

If the thyroid gland is not palpable, measurement of radioactive iodine uptake is needed to differentiate goitrous from athyreotic cretinism. In contrast to the low or negligible uptake of I^{131} in the athyreotic cretin, the uptake in the very young goitrous cretin is normal or higher; but if goitrous cretinism has progressed untreated beyond infancy, large nodules may develop in the gland with degenerative foci which become fibrotic and calcify, reducing iodine uptake below normal. Another situation is that of the goitrous cretin receiving thyroid extract, which reduces both the size of the goiter and the iodine uptake; to differentiate from athyreosis in this case, either the thyroid therapy must be interrupted for a month or longer, or thyrotropin must be administered before radioiodine uptake is measured.

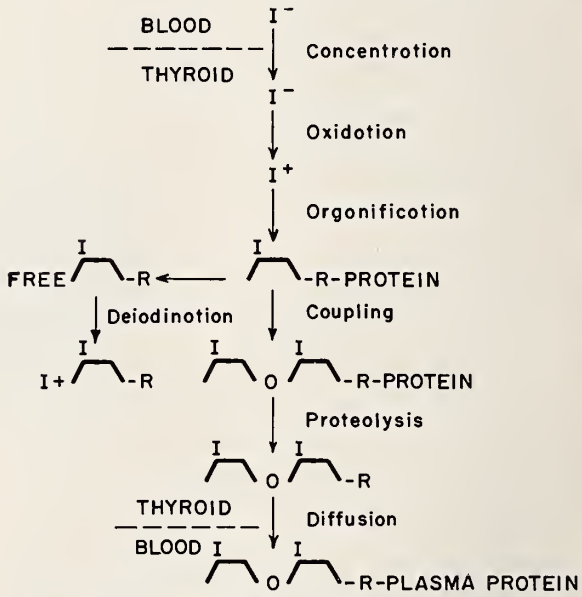


Chart 1.—The principal steps of iodine metabolism in the mammalian thyroid as they are generally accepted today.

The clinical result of treatment is the same whether the cretinism is due to athyreosis or to metabolic defect. The prognosis as to mentality depends on how severely the hypothyroidism has affected the critical stages of early brain development.[12]

From the Division of Metabolism and Endocrinology in the Department of Pediatrics, University of California School of Medicine, Los Angeles 24, California.

Presented before the Section on Pediatrics at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

Supported in part by Grant No. A-1710 from the National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda 14, Maryland.

CAUSES AND INCIDENCE

Goitrous cretinism is often familial, whereas the athyreotic condition rarely occurs with a family history of cretinism or other thyroid disorders. Hutchison and McGirr[3] found a high incidence of goitrous cretinism among the itinerant Scottish tinker families in whom there is a relatively high degree of consanguinity. Their data and the results of other studies suggest inheritance through the transmission of an autosomal recessive gene.[5,6,13,20] A more complex pattern of inheritance in some cases is suggested by the occurrence of thyroid disorders other than goitrous cretinism in collateral members of the family.[16,19]

Lelong and co-workers[6] found 46 case reports of sporadic goitrous cretinism in the world medical literature between 1943 and 1956 and added reports of five cases they had observed. Subsequent cases have been reported* and it is probable that many more are not reported or are not recognized. In the United States probably the most accurate indication of incidence can be derived from the data of Osler who found that in regions of the United States where goiter was not endemic, 7 out of 58 cretins had goiters (these figures were reported in 1897 before the general use of thyroid replacement therapy[11]). In a large series of cretins recently reported by Smith and co-workers,[12] goiters were present in 8 of 132 cases of cretinism due to glandular deficiency, but goiters in some of these cases may have been suppressed by the thyroid products which many of the patients had received from infancy or early childhood. On the basis of these data it would appear that about 10 per cent of cretinism due to glandular deficiency is of the goitrous type—that is, it is due to metabolic defects in the thyroid gland rather than to absence of thyroid tissue.

DEFECTS IN THYROID HORMONE SYNTHESIS

The early biochemical studies on goitrous cretinism produced evidence that some cases were due to an enzymatic defect in thyroidal hormone synthesis. This gave impetus to further studies of defects which might be expected to yield indirect information concerning the normal stages in the synthesis of thyroid hormone.

Pioneering chemical and isotopic studies showed the following steps of iodine metabolism: In the normal mammalian thyroid gland (Chart 1), iodide from the blood is concentrated in the thyroid cells, oxidized and attached to protein in the form of iodinated tyrosine, histidine or thyronine derivatives. In man the principal iodothyronines in the thyroid gland are thyroxine and triiodothyronine, the active

*References 2, 5, 7, 8, 10, 13, 20, 21.

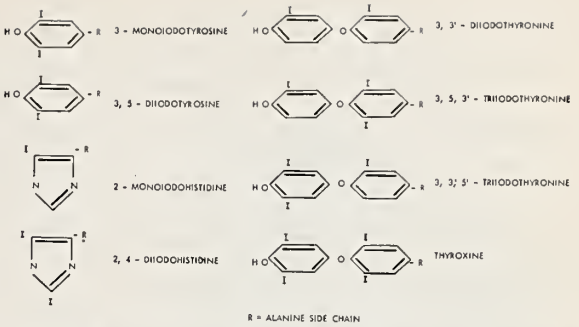


Chart 2.—Iodinated amino acids known to occur in mammalian thyroid.

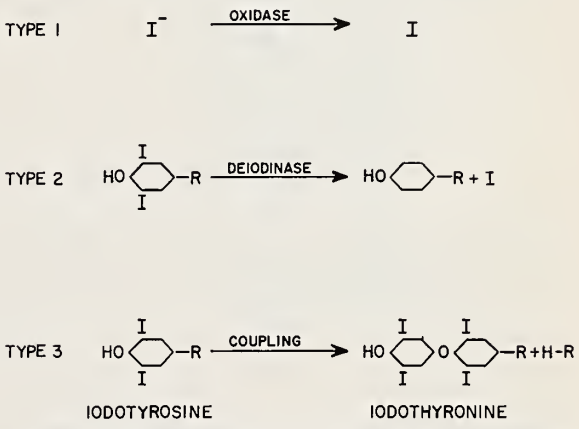


Chart 3.—Three reactions in thyroidal iodine metabolism which have been shown defective in cases of goitrous cretinism.

thyroid hormones (Chart 2). These are split away from thyroglobulin by the action of proteolytic enzymes in the thyroid colloid and pass through the epithelial cells into the capillaries. The hormones are then bound by serum proteins which carry them to the body tissues where they exert their influence on the rate of metabolism. Free iodinated amino acids in the thyroid gland are enzymatically deiodinated. The iodine liberated by this reaction is probably re-used in this metabolic cycle.

The defects known to occur in goitrous cretins are limited to three steps in thyroidal iodine metabolism (Chart 3). The first is failure to oxidize iodine to elemental iodine, resulting in failure of all the subsequent processes (Chart 4). Stanbury first demonstrated this defect in one family with goitrous siblings[14]; it was subsequently reported in other goitrous cretins.[6,15] The defect is demonstrated by the administration of thiocyanate to these patients during the I^{131} uptake study. The defective gland promptly releases as much as 80 or 90 per cent of the total uptake of I^{131} back into the bloodstream. Chromatographic analysis of the thyroid gland in

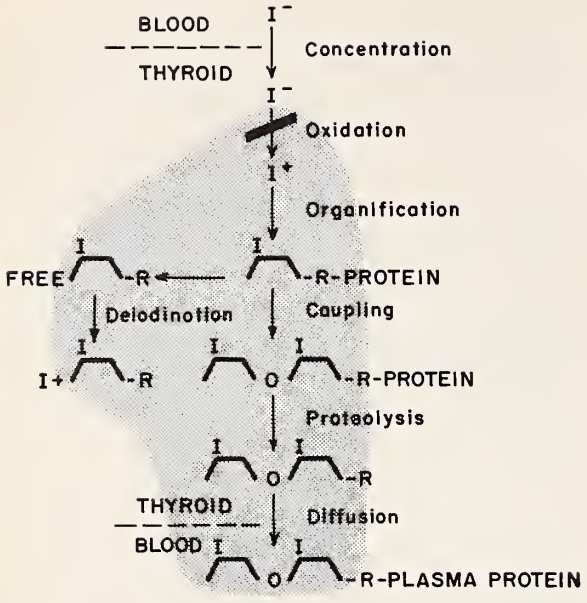


Chart 4.—The effect of the defect in oxidation of inorganic iodide on the remaining reactions in thyroidal iodine metabolism. The shaded area covers the reactions failing to occur. The diagonal bar indicates the point of defect.

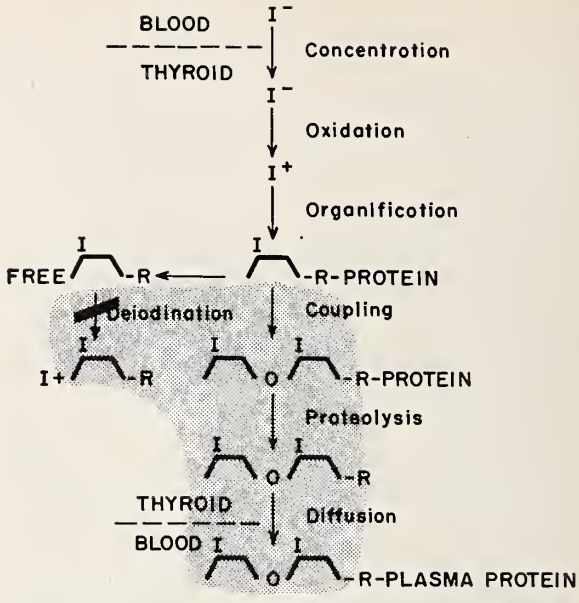


Chart 5.—The effect of the defect in deiodination of free iodotyrosines on iodine metabolism. The diagonal bar indicates the point of defect.

this condition shows only the presence of inorganic iodide.[16]

The second defect, a failure to deiodinate free iodotyrosine, may be suspected when unusual quantities of labeled iodotyrosine are found in the blood or urine of patients after administration of I^{131} (Chart 5). The biochemical nature of the defect was first elucidated by Stanbury,[17] although Costa and co-workers[1] and McGirr and Hutchison[9] had previously reported chromatographic evidence for the presence of iodotyrosine in the blood in other cases of goitrous cretinism. The occurrence of this defect in other cretins was recently independently reported.[5,8] Thyroid tissue from the patients does not deiodinate diiodotyrosine *in vitro*, and the patients, as well as some euthyroid members of their families, are also defective in the peripheral deiodination of intravenously administered iodotyrosine.[18]

The third defect is a failure to form iodothyronine although the gland is capable of organic binding of iodine and deiodination of iodotyrosine (Chart 6). The defect is demonstrated by the administration of I^{131} to the patient and later analysis of the labeled products in blood and in thyroid tissue. The thyroglobulin contains ample quantities of iodotyrosines but is deficient in thyroxine and triiodothyronine. Cases of this type have been reported by Stanbury and co-workers,[16] Lelong[6] and Mosier, Blizzard and Wilkins.[10] The last-named demonstrated that this

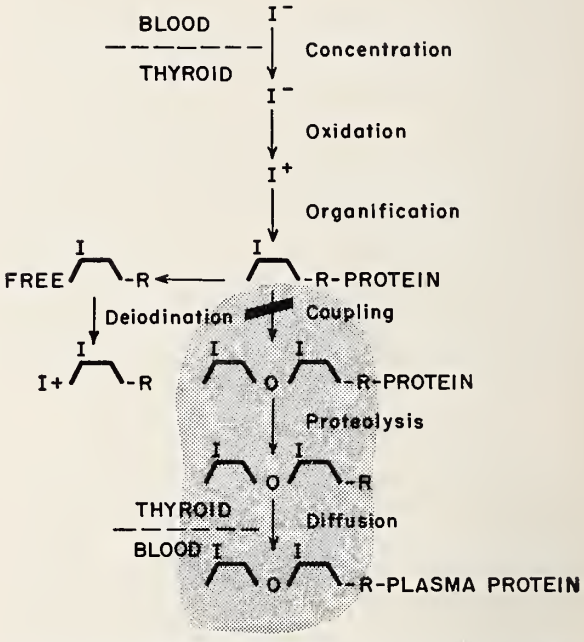


Chart 6.—The effect of failure to couple iodotyrosines on the remaining steps of hormonal synthesis. The diagonal bar indicates the point of defect.

defect can be a virtually complete block in the formation of thyroxine. Chart 7 shows their analysis of the thyroid tissue of two patients with this defect.

Thus far no other defects in thyroid metabolism have been identified, although it is conceivable that an enzymatic defect could exist in any link in the chain of synthesis of thyroid hormone (Chart 2).

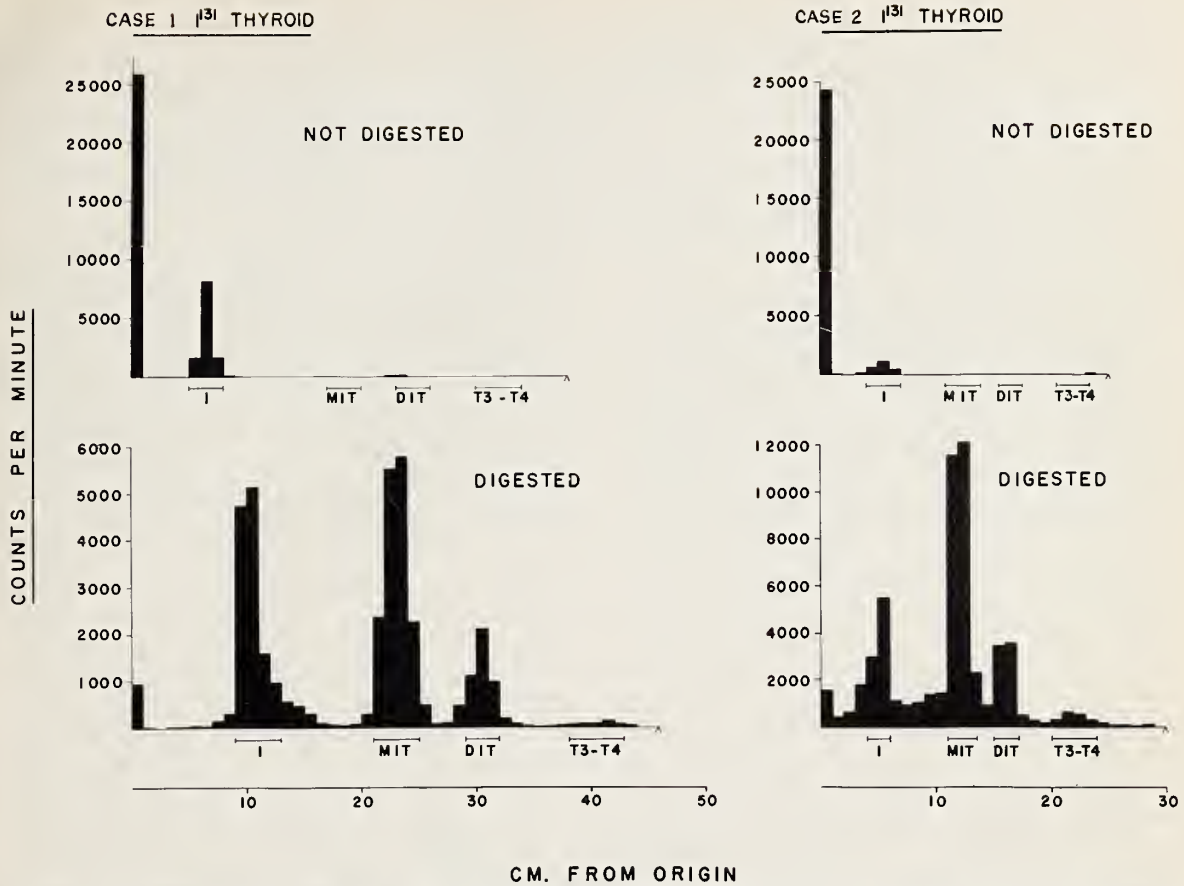


Chart 7.—Chromatographic analysis of the thyroids of 2 patients with defects in the coupling reaction. The patients received I^{131} prior to thyroidectomy. The charts show the distribution of labelled compounds in the thyroid before and after digestion with tryptic enzymes. The abbreviations are MIT for monoiodotyrosine, DIT for diiodotyrosine, T_3 for triiodotyrosine, T_4 for thyroxine and I for iodide. From Mosier et al.[10] The ordinate shows intensity along the chromatogram in terms of counts per minute in a scintillation well counter. The abscissa indicates the distance along the chromatogram from the origin or starting point of the chromatogram. The solvent form is indicated by the symbol ^ at the right end of the abscissa. The results show relatively little radioactivity in the triiodotyrosine-thyroxine region (T_3-T_4), indicating an inability on the part of the gland to form these products from iodotyrosine.

TREATMENT

The treatment for cretinism due to thyroid deficiency—whether of the athyreotic or the metabolic type—is simply replacement with dessicated thyroid extract, U.S.P., or thyroxine or triiodothyronine. The desiccated thyroid is the safest and cheapest preparation for children and infants. Treatment with iodide is not rational and may only cause the goiter to enlarge. I^{131} therapy is contraindicated because it damages the gland still further and may cause malignant changes. The goiter usually regresses completely under replacement therapy, but in some cases of long standing the fibrosis or calcification may prevent complete regression and thyroidectomy may be indicated for cosmetic purposes.

University of California at Los Angeles Medical Center, Los Angeles 24.

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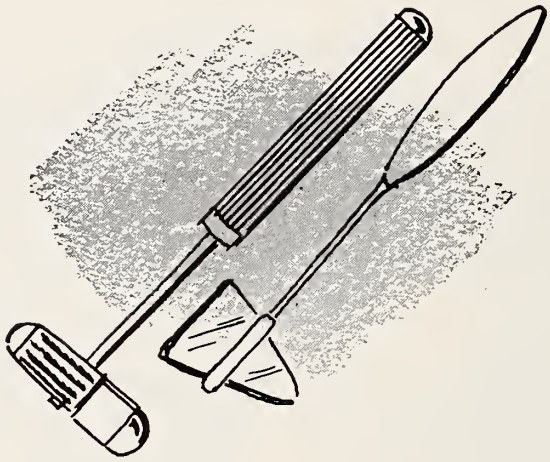
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Para-Articular Fusion of the Proximal Interphalangeal Joint of the Hand

BERNARD J. DRURY, *M.D.*, Santa Barbara

• **The para-articular procedure for the arthrodesis of an interphalangeal joint is more reliable, rapid and simpler than intra-articular fusion. The position is easily maintained, and therefore one has no difficulty with approximating the flexion and rotational angles. Since a large dead space is not produced in carrying out the procedure, use of a compressing force for adequate surface contact is not necessary. Shortening of the finger is not a hazard. A Kirschner wire is used in the technique described, which gives good protection for the graft and keeps the joint in the desired position without distracting the surfaces during the bony resorption at the joint.**

SURGEONS INTERESTED in the reconstruction of bone well realize that the surgical fusion of a joint is not always successful. Even though it is not subject to the strain and stress of a weight-bearing joint, the interphalangeal joint is possibly more difficult to fuse than any other.

The most frequently used method of interphalangeal joint fusion is intra-articular arthrodesis. In this procedure the joint is widely opened, the joint cartilage removed and the apposing bony surfaces brought into contact. The most common means of fixation is the use of crossed Kirschner wires while the surfaces are held in contact by a towel clamp or a special apparatus. This method, while bringing about firm fusion when successful, has not been entirely dependable. It is often quite time-consuming and lacks simplicity. The following difficulties have been encountered in using it:

1. In the process of removing cartilage and shaping the phalangeal surfaces, a considerable dead space may be produced.

2. The remaining soft para-articular tissues tend to keep the surfaces distracted in spite of attempts to press the phalanges together.

3. The approximation of the joint surfaces in the desired amount of flexion and the proper rotation is technically difficult.

4. After successfully apposing the bone, using crossed Kirschner wires, one is faced with the fact that this fixation does not allow good contact after normal bone resorption takes place.

These conditions are more likely to lead to nonunion than to firm bony arthrodesis. Using this method, one often ends with a shortened finger because of the amount of tissue removed. However, it must be admitted that this is sometimes desirable for function, even though for cosmetic reasons it may not be.

A more simple, rapid and dependable method is desirable.

Arthrodesis of the interphalangeal joint is most frequently indicated in a joint involved with arthritis, whether due to traumatic, degenerative or infectious causes. In most such cases the joint, while painful, is already partially fixed by adhesions and capsular contractions. The joint surfaces, although damaged, are usually in contact. The method to be described was first performed on a typically osteoarthritic interphalangeal joint. After the joint was exposed for the usual intra-articular arthrodesis, the following problems were confronted: The removal of the cartilage and subcortical cystic areas, in order to expose good bleeding bone, would leave a large dead space and cause considerable shortening of the finger. The same joint exposure would completely loosen the partially fixed joint and also entail some difficulty with the positionings. In light of these considerations the following procedure was performed and since has been used with moderate variations eleven times.

TECHNIQUE

With a pneumatic tourniquet inflated upon the arm, a dorsal midline incision is made over the proximal interphalangeal joint. It is extended half way up the middle phalanx and approximately three-quarters of the way down the proximal phalanx. The extensor apparatus thus exposed is split in the same direction and for the same length as the skin incision. The flexion angle and rotation of the interphalangeal joint are approximated. At this time a large Kirschner wire is inserted through the mid and proximal phalanges volar to the joint. Using a Stryker saw, a central block is removed from the

From the Department of Orthopedics, Sansum Medical Clinic, Santa Barbara.

Presented before the Section on Orthopedics at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.



Figure 1.—Anterio-posterior roentgenogram showing the Kirschner wire in place in the para-articular arthrodesis of the proximal interphalangeal joint. The bone block is still slightly visible three months following operation. The fusion appears solid.

joint, (approximately 5 millimeters of the proximal portion of the mid phalanx and 10 millimeters of the distal portion of the proximal phalanx). The block from the proximal phalanx is then reversed and placed into the slot made by the cutting already described, thus spanning the joint. The remaining portion of bone is ground and set about the joint. The extensor apparatus and skin are closed simultaneously by using interrupted figure-eight sutures of No. 34 steel wire. A pressure dressing is applied to the entire hand and the tourniquet released.

DISCUSSION

Certainly the use of a key graft for the arthrodesis of a joint in the hand is not new. This technique, with the use of an iliac graft, is frequently used for the arthrodesis of the first carpometacarpal joint.[2]



Figure 2.—A lateral roentgenogram showing the Kirschner wire volar to the proximal interphalangeal joint. The cortical portion of the bone block can still be seen two months post-operatively. There appears to be bony union at the joint.

However, in this instance, it is generally advocated that the cartilage surfaces be removed before a fusion is attempted. Brittain[1] described a procedure similar to the one here reported, but using an intramedullary peg. This method, however, would seem to entail disadvantages, in that the joint surfaces must be removed and the finger unnecessarily manipulated.

Although the above described technique is the one now most often used by the author, in one case of interphalangeal fusion on a paralyzed hand, the procedure used was an interphalangeal cortical graft, an iliac block and iliac cancellous grafts in different interphalangeal joints. All of these were of the key type fusion but with different graft materials. There was no difference in the fusion time or stability. Therefore, if iliac bone is available, its use will further decrease the operating time. This is especially helpful when performing multiple fusions.

317 West Pueblo, Santa Barbara.

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Esophageal Hiatal Hernia

Some Aspects of Surgical Treatment

ORVILLE F. GRIMES, *M.D.*, San Francisco

• **Patients with esophageal hiatal hernia often have an array of distressing complaints and physical signs that are difficult to interpret. Physiologic and anatomic studies of the gastroesophageal area in the region of the esophageal hiatus of the diaphragm indicate the existence of a three-in-line sphincter group, consisting of the inferior esophageal constrictor, diaphragmatic pinchcock and cardioesophageal junction. These mechanisms, acting in unison, prevent regurgitation in normal persons.**

It also can be deduced from clinical, radiologic and experimental data that anatomic disturbances at the esophageal hiatus account for physiologic alterations. A reasonable explanation for the symptoms and signs of esophageal hiatal hernia can be made on the basis of the functional competence of the three-in-line sphincter mechanisms.

ALMOST ALL OBSERVERS agree that asymptomatic esophageal hiatal hernia needs no surgical treatment. Some disagreement on the importance of symptoms may exist between surgeons and internists. An internist's experience may include many mild cases while a surgeon's is often limited to patients with symptoms severe enough to warrant surgical intervention. Even in patients with hernias of considerable size one cannot predict that complications are likely. In recent years it has become recognized that size alone is an indefinite and unreliable criterion for surgical intervention. Not infrequently, small hernias may cause severe symptoms and oftentimes huge esophageal hiatal hernias may be discovered only during the study and treatment of other conditions (Figure 1 A, B).

The severity of symptoms is often unrelated to the degree of gastroesophageal reflux demonstrated in roentgenologic studies. Regurgitation of barium into the lower portion of the esophagus often occurs easily during the gastrointestinal study, yet the patient will have no symptoms of peptic regurgitation or esophagitis. Conversely, minimal gastric reflux may result in severe esophagitis. It is to be remembered, however, that such radiologic studies represent but a mere fraction of the total time that regurgitation may occur during the various phases of human activity. A barium study that shows no reflux does not necessarily indicate that regurgitation never occurs.

Nonsurgical treatment of symptomatic hiatal hernia has been described as being successful in 40 to 70 per cent of cases. Conservative therapy is designed to minimize gastroesophageal reflux and to dilute or neutralize the peptic activity of the regurgitant fluid. Treatment includes the regulation of diet, neutralization of gastric acidity, reduction of weight, and advice on the correct posture to assume while eating or sleeping. Eating while sitting rigidly upright often helps, as does raising the head of the patient's bed four to eight inches so that he may be in a semi-upright position while sleeping. The mere use of pillows to raise the patient's head, however, often defeats the purpose; pillows cause flexion of the body at the costal margins, bringing pressure by the anterior rib cage on the contents of the upper part of the abdomen, which in turn causes a pronounced increase in upper intra-abdominal pressure. If the patient is placed in a gradually declining position from head to feet, gravity can drain gastric juices away from the lower esophagus without alteration of the intra-abdominal pressure relationships (Figure 2).

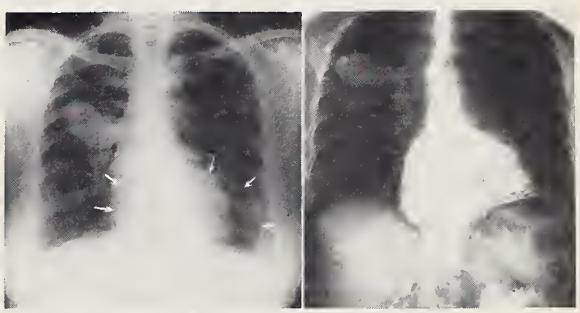


Figure 1.*—Completely asymptomatic large hiatal hernia, outlined by arrows in the plain film of the chest *(left)* and in a later film *(right)* by barium, in a patient being treated for a tuberculoma of the right upper lobe.

Chairman's Address, Section on General Surgery, California Medical Association Meeting, Los Angeles, April 1957.

From the Department of Surgery, University of California School of Medicine, San Francisco, California.

Submitted September 3, 1958.

*NOTE: Figures 1, 3, 4, 5, 6 and 8 are reproduced with the permission of the *American Journal of Surgery,* and originally appeared in an article entitled "The Surgical Treatment of Esophageal Hiatus Hernia," by Orville F. Grimes and H. Brodie Stephens, Am. J. Surg., 94:194-207, August 1957.

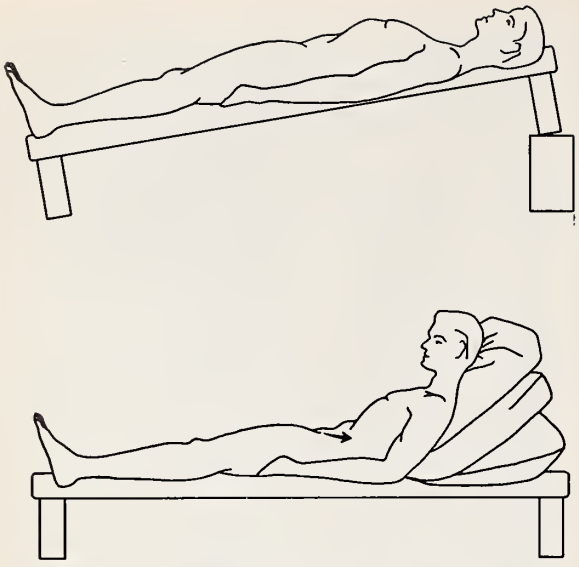


Figure 2.—A gradual decline from head to foot provides optimum gravity drainage. The use of pillows often promotes rather than prevents regurgitation into the lower esophagus.

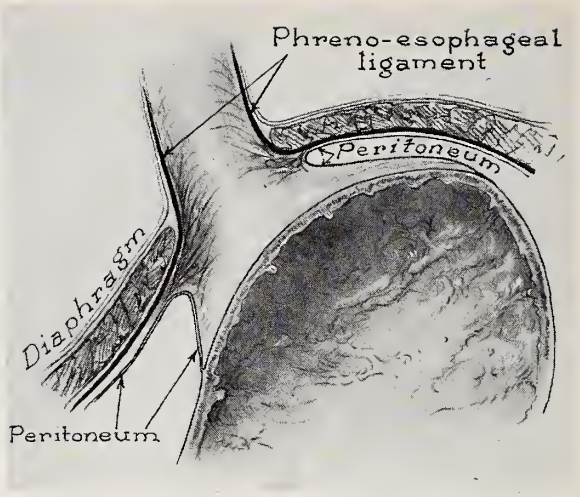


Figure 3.—The phrenoesophageal ligament consists of the fascia of the diaphragm which surrounds the esophagus at the hiatus and progresses along the lower esophageal segment to insert at the level of the inferior esophageal constrictor.

Conservative estimates indicate that at least 30 per cent of patients with symptomatic esophageal hiatal hernia will receive little or no benefit from conservative management. The reasons for failure are many and are related mainly to obesity, varying degrees of organic narrowing of the esophagus and a high degree of peptic activity. Probably most important is the unrelenting gastroesophageal reflux that occurs because of the anatomic and physiologic disturbance at the esophageal hiatus of the diaphragm which no conservative program can remedy.

That the normal structure of the esophageal hiatus of the diaphragm serves to prevent abnormal regurgitation is well known.[1] Such protection is afforded even though the intra-abdominal pressure exceeds that of the thorax by 4 to 12 millimeters of mercury. Even standing on one's head does not cause emptying of the stomach back into the esophagus. Furthermore, one can drink water in a normal fashion while in the head-down position without the occurrence of regurgitation. This suggests that although the cardioesophageal junction may open to allow passage of foods and fluids normally, the valvular mechanism prevents regurgitation even in these extreme circumstances. These simple physiologic facts indicate that a sphincteric mechanism not only exists but also functions dynamically to protect the esophagus as long as the region remains anatomically intact.

It is to be remembered that normally the terminal two to three centimeters of the esophagus lie below the level of the diaphragm and are exposed to positive intra-abdominal pressure. The combination of positive intra-abdominal tension and frequently an even greater positive intragastric pressure would force the contents of the stomach into the lower esophagus were it not for the existence of sphincteric action of some type at the gastroesophageal junction. This protective ability may be due to an intrinsic valve-like action at the cardioesophageal junction brought about by the interdigitation of the muscular coats of the esophagus and stomach as well as by the preservation of the angle at which the esophagus meets the stomach. The importance of this angle has been properly stressed.[2] It is conceivable, however, that the angle is important only insofar as it permits proper alignment and functioning of the interdigitating muscular fibers of each organ as they intertwine at the junction of the esophagus with the stomach. It is also possible that the angle of entry is important insofar as its presence indicates that the abdominal portion of the esophagus is of normal length and is correctly positioned and tethered.

The normal length of the esophagus may be a factor in the prevention of regurgitation, since the fundus of the stomach lying alongside the abdominal esophagus may by gaseous distention compress this portion of the esophagus against the left lobe of the liver. This, along with the gastroesophageal junction itself, may serve to prevent significant regurgitation yet allow enough physiologic relaxation to permit the orderly passage of food from the esophagus to the stomach in response to the peristaltic activity of the esophagus proximal to this area.

The competence of the cardioesophageal sphincter mechanism depends, therefore, upon normal anatomic relationships in and about the area of the esophageal hiatus of the diaphragm. These relation-

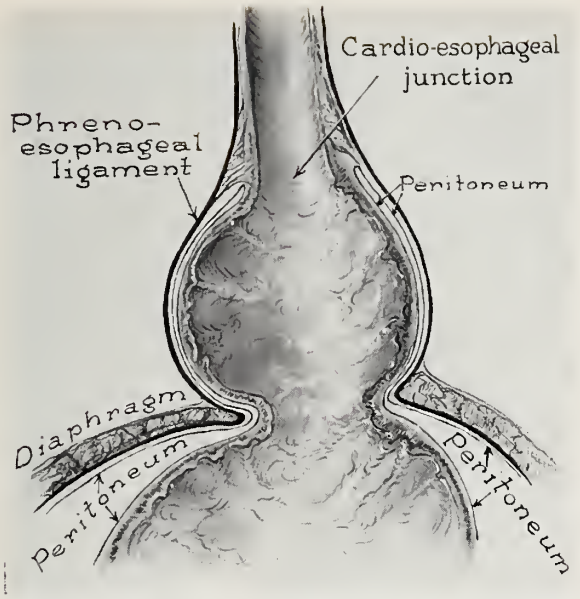


Figure 4.—Esophageal hiatal hernia of the sliding type. The phrenoesophageal ligament is elongated and weakened, allowing the lower esophagus and stomach to slide upward into the mediastinum. The normal angle of the junction of the esophagus with the stomach has been obliterated.

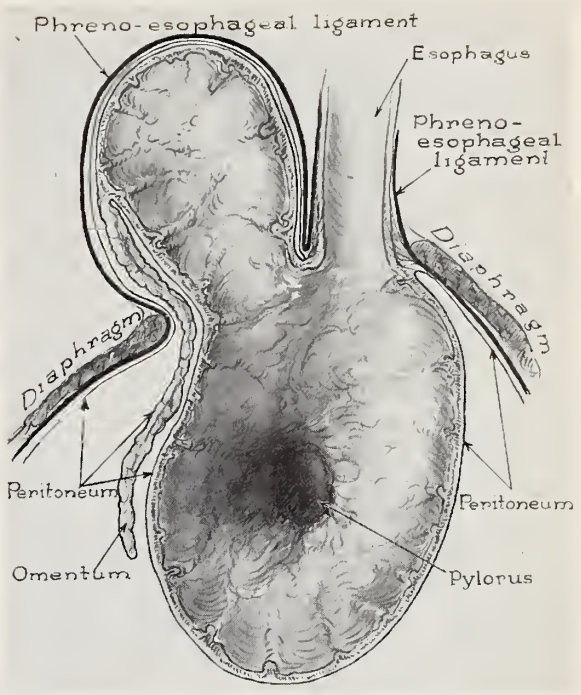


Figure 5.—Diagrammatic cross-section showing the normally placed cardioesophageal junction in the paraesophageal type of hiatal hernia. The herniated portion of the stomach lies alongside the lower esophagus.

ships are maintained by the integrity of the hiatus and particularly by the phrenoesophageal ligament which, when intact, restrains, along with the peritoneal reflections in this area, the lower end of the esophagus in its normal position below the diaphragm (Figure 3). As the esophageal hiatus becomes weakened and enlarged due to the patient's increasing age, obesity or other factors, the phrenoesophageal ligament must also be attentuated and weakened concomitantly. This sets the stage for further weakening and elongation of the ligament, aided by the upward force created by the differential positive pressure within the abdomen and the negative pressure within the thorax.

These alterations allow a loosening of the tethering effect upon the lower portion of the esophagus, permitting the entire segment, consisting of the lower esophagus and upper stomach along with the elongated phrenoesophageal ligament, to slide upward into the posterior mediastinum (Figure 4). This cephalad migration is enhanced by the natural elastic recoil of the esophagus which occurs during the act of swallowing. As a result a sliding hernia of the esophageal hiatus of the diaphragm occurs. In almost all instances the movement of these segments is a two-way transfer, since the shortening of the esophagus is physiologic rather than organic. The herniated viscera may reduce themselves into a normal state below the diaphragm when the patient is in an upright position, by the effect of gravity resulting from a full stomach after meals; or the reduction may be brought about by a definitive surgical procedure.[3]

As long as the lower esophagus, cardioesophageal junction and upper portion of the stomach remain displaced in the thorax, as in hiatal hernia of the sliding type, regurgitation leading to esophagitis is likely to occur since the area is completely disturbed anatomically and physiologically. In most instances, esophagitis causes the most significant symptomatology in patients with sliding hiatal hernias and is the main justification for surgical repair.

Hiatal hernia of the paraesophageal type presents quite a different problem with respect to etiology, symptoms and treatment. In herniation through the esophageal hiatus, the abdominal esophagus remains correctly positioned and maintains its normal relationship with the lesser curvature of the stomach. It follows, however, that since a part of the stomach herniates through the esophageal hiatus into the posterior mediastinum, a part of the circumferential span of the phrenoesophageal ligament must be carried upward into the thorax along with the similar and corresponding segment of the peritoneum that invests the stomach. It is possible that a segment of peritoneum is left behind in the thorax during embryonic development and constitutes the sac of a paraesophageal hernia. In either event the sac will be composed of two layers, namely the peritoneum and the elongated, weakened phrenoesopha-

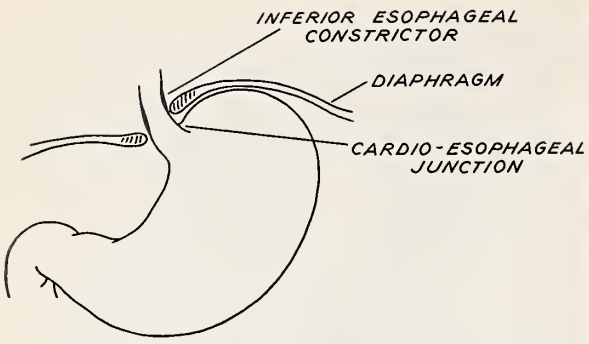


Figure 6.—The inferior esophageal constrictor, the diaphragmatic pinchcock and the cardioesophageal junction provide a three-in-line sphincter mechanism to prevent regurgitation.

geal ligament. It is to be remembered that the sac in the sliding hernia is also composed of the same two layers. In the latter instance, however, the entire circumference of the peritoneum and phrenoesophageal ligament becomes weakened at its reflection at the esophageal hiatus, permitting the complete sheath of peritoneum and phrenoesophageal ligament to participate in the formation of the hernia (Figure 5).

It is well accepted that a valve-like action exists at the cardioesophageal junction. The role of the two other actual or possible sphincter mechanisms acting in and upon the lower part of the esophagus is still not completely understood. These mechanisms are the so-called diaphragmatic pinchcock and inferior esophageal constrictor (Figure 6). The exact role of the diaphragm in the prevention of regurgitation is as yet undetermined and opinions vary considerably regarding its function, or lack of it. There is little doubt that in normal persons some active muscular contraction occurs at the esophageal hiatus of the diaphragm. This can be demonstrated easily if one inserts a finger into the lower esophagus during gastrostomy. The pressure exerted upon the finger by the diaphragm is easily recognizable. How much similar action is possible when the esophageal hiatus is weakened and enlarged can only be surmised. Spasm of the diaphragm is possible even with an enlarged hiatus and may even account for some of the confusing symptoms and signs associated with hiatal hernia.

Above the level of the diaphragm the third sphincteric mechanism (inferior esophageal constrictor)[4-7] may act along with the other two (diaphragmatic pinchcock and gastroesophageal junction) as a third-in-line mechanism to prevent regurgitation. That there is some sort of process which causes hesitation in the downward descent of a column of barium in the lower esophagus, two to four centimeters above the diaphragm, has been recognized for many years. Almost always the column will be delayed momentarily at this point before it passes into the remainder of the esophagus and thence into the stomach (Figure 7). That portion of the esophagus between the inferior constrictor and the gastroesophageal junction has been called the gastroesophageal vestibule; the area immediately above the constrictor has been termed the phrenic ampulla. It has been shown by balloon pressure studies that the peristaltic activity of the gastroesophageal vestibule is quite different from that of the remainder of the proximal esophagus.

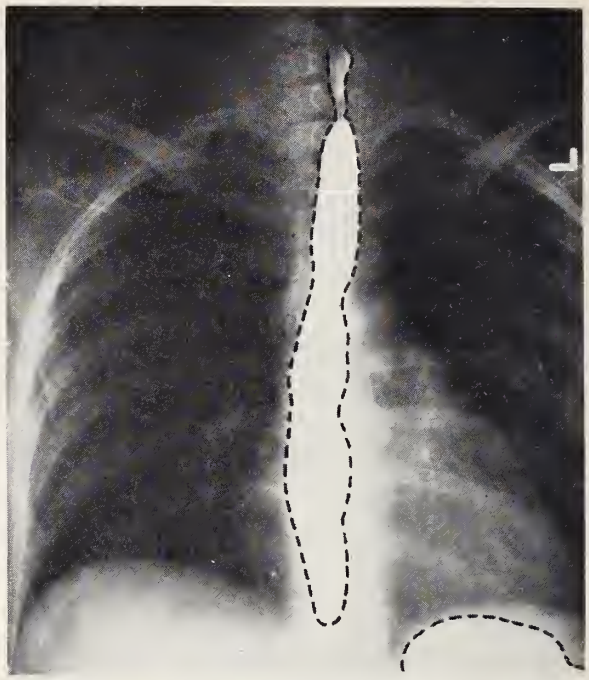


Figure 7.—The functional existence of a lower esophageal constrictor is demonstrated by the momentary hesitation of a column of barium in the lower esophageal region.

The phrenoesophageal ligament, as it reflects itself from the undersurface of the diaphragm upward to become the fascia of the esophagus, is finally inserted into the circular muscle of the esophagus at the level of the inferior esophageal constrictor. The ligament serves as a natural antagonist to the longitudinal pull of the esophagus. Some investigators have described an anatomic thickening of the circular muscle at the level of the constrictor; this constitutes anatomic evidence of a sphincter and augments the evidence gained from physiologic and radiologic observations.

The inferior esophageal constrictor may serve to prevent esophagitis in some instances and probably acts as part of a team consisting of the three-in-line sphincters which act in physiologic unison to allow antegrade passage of food and fluids into the stomach yet prevent significant regurgitation. The inferior constrictor, however, may be strong enough

to prevent regurgitation from a herniated gastric pouch, even when the other two sphincteric mechanisms may be non-functional. If so, this sphincteric action may explain the absence of demonstrable esophagitis by roentgenograms and esophagoscopy even when symptoms of substernal burning pain are present. In this situation the gastric juice is contained within the gastric pouch even though it is displaced into the mediastinum, thus providing the substernal burning pain suggestive of esophagitis but which in reality is due to gastritis in the herniated segment of the stomach (Figure 8). In these circumstances esophagoscopy will demonstrate a normal lower esophageal segment.

In hiatal hernia of the paraesophageal type, symptoms of esophagitis are the exception rather than the rule. This is true because the length of the esophagus and the relationships at its junction with the lesser curvature of the stomach are preserved physiologically and anatomically. Instead of the substernal or epigastric burning pain so often produced by esophagitis, patients with the paraesophageal hernia commonly complain of pressure symptoms. Palpitations are not infrequent and there is often a sense of fullness or actual pressure in the lower anterior thorax. It must be acknowledged that as a considerable portion of the stomach rolls upward into the mediastinum the gastroesophageal junction will occasionally be displaced by traction, allowing some regurgitation to occur. In such patients esophagitis and distressing pressure symptoms may coexist.

The hemorrhage from an esophageal hiatal hernia which occasionally occurs in a patient without esophagitis can also be explained on the basis of a gastric pouch lying above the diaphragm. Here again, if the inferior esophageal constrictor functions well the action of the gastric juice will be limited to the mucosa of the herniated stomach and may produce hemorrhage even though there is no esophagoscopic evidence of esophagitis. The hemorrhage may be promoted further by venous stasis of the herniated stomach. If both the diaphragmatic pinchcock and the inferior constrictor remain competent, a closed-pouch effect may occur at either end of the herniated portion of the stomach, enhancing the possibilities of gastritis and hemorrhage by means of stasis of gastric contents. If the action of the diaphragmatic pinchcock is excessive it may force peptic juice out of the herniated stomach into the lower esophagus, regardless of the strength of the inferior esophageal constrictor.

The operative repair of an esophageal hiatal hernia is also related to the concept of the three-in-line sphincter mechanisms as well as to the reconstitution of the normal anatomy of the region of the esophageal hiatus. In the operative repair, nothing can be

THE DIAPHRAGMATIC PINCHCOCK AND THE INFERIOR ESOPHAGEAL CONSTRICTOR

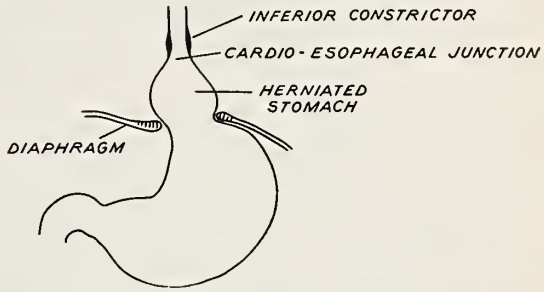


Figure 8.—A competent inferior esophageal constrictor may prevent esophagitis even in the presence of a sliding esophageal hiatal hernia.

done to the inferior esophageal constrictor except that in the surgical shortening of the phrenoesophageal ligament to which it is attached, the inferior constrictor may again become more competent. The diaphragmatic pinchcock action, if indeed it does exist, can be restored by approximating the crura posteriorly so that the hiatus again accommodates the esophagus.

By excision of the hernial sac and shortening the phrenoesophageal ligament, the physiologically shortened esophagus is again lengthened and brought down below the level of the diaphragm. As this is accomplished, the normal visceral relationships and physiologic activity are functionally restored. At least two of the three-in-line sphincter mechanisms are thus surgically restored; the sphincteric mechanism at the gastroesophageal junction is brought about by restoring the normal anatomic relationships and cardioesophageal angle and, secondly, closure of the crura snugly about the abdominal esophagus restores the diaphragmatic pinchcock. If in addition the inferior esophageal constrictor remains functional, then a complete restoration of the three-in-line mechanisms preventing regurgitation is established.

The concept of the three-in-line sphincter mechanisms, either acting in unison or one or more acting normally, may also account for some of the good results produced after various methods of surgical repair. One such procedure recommended by some surgeons, especially for elderly patients, is simple crushing of the left phrenic nerve. Good results can be expected from this procedure in patients in whom the diaphragmatic pinchcock is spastic, and in such cases paralysis of the phrenic nerve may prevent symptoms. Other surgeons have suggested transplantation of the esophageal hiatus to the dome of the diaphragm, especially when the esophagus has become moderately shortened. In this instance no

diaphragmatic pinchcock action is possible. Good results from such a procedure are dependent, therefore, on restoration of at least one, and perhaps two, of the other sphincter mechanisms.

Perhaps the large yet asymptomatic esophageal hiatal hernia can also be explained on the basis of the three-in-line sphincter mechanisms. In this instance one may visualize that the diaphragmatic pinchcock is completely functionless and without contractile power because of the huge size of the hiatus. However, a strong functioning inferior constrictor may serve to prevent regurgitation and the disabling effects of esophagitis. Why the patients do not have symptoms referable to the volume of the herniated stomach is difficult to explain but may be related to the slow development of the hernia and gradual accommodation of the herniated stomach within the thorax.

University of California School of Medicine, San Francisco 22.

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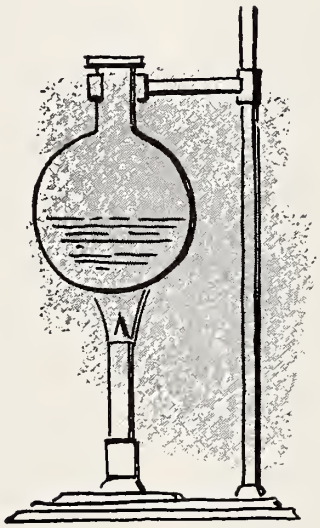
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Flavonoid Therapy in Diabetic Retinopathy

PAUL M. BRICKLEY, *M.D.*, BYRON L. GIFFORD, *M.D.*, and CASIMIR A. DOMZ, *M.D.*, Santa Barbara

• **A new flavonoid, CVP (citrus vitamin P) had no beneficial effect on diabetic retinopathy in 33 patients. Minor improvement in retinal status occurred in 27 per cent of the patients. This rate of improvement is the same as that previously reported after many different therapies, and probably represents spontaneous variation in the course of this disease.**

Diabetic retinopathy is reversible. Spontaneous involution of microaneurysms, hemorrhages and exudates has been noted by many observers.* Such improvement is usually partial and temporary, occurring only in patients with mild or moderate retinopathy. Complete remission of advanced diabetic retinopathy, the ultimate goal, was first reported by Green[20] in 1950 following adrenalectomy, and later by Poulsen[41] in a case in which postpartum necrosis of the pituitary gland had occurred.

Surgical attempts to induce similar remissions in patients with advanced retinopathy have been the subject of optimistic reports. In describing the results of hypophysectomy in 20 diabetics, Luft and co-workers[34] stated that in the 12 surviving patients, ". . . except for occasional retinal hemorrhages, no symptoms or signs of progression of the diabetic retinopathy were evident. . . . Improvement in visual capacity and/or eyeground changes were noted in most cases." Similar results were described by Kinsell and associates after hypophysectomy in seven diabetic patients. Gordon[17] said that in eight patients surviving hypophysectomy, ". . . striking improvement in the retinopathy has occured uniformly." Schimek[46] reported that five diabetic patients had clearing of hemorrhages after hypophysectomy, but exudates and retinitis proliferans remained unchanged. Headstream and Wortham[22] noted improvement in the retinopathic state in six of seven patients subjected to adrenalectomy. Graef[19] and Malins[35] also reported upon use of adrenalectomy for diabetic vasculopathy.

Follow-up observations have dimmed the hopes of these investigators,[36] except for Gordon, who remains convinced that worthwhile improvement follows hypophysectomy, and Luft, who said that a second series of hypophysectomies is now being done in Sweden, using the antral approach to the hypophysis.[36]

Medical attempts to reverse the ravages of diabetic retinopathy have been unrewarding thus far. In recent years many forms of therapy have been tried, with unimpressive results (Table 1).

In widest use today is a flavonoid, rutin. Interest in flavonoids was first kindled by Szent-Gyorgi's isolation in 1936 of a compound from lemon juice and from Hungarian red pepper (paprika) which he felt was useful in purpura unresponsive to vitamin C. Originally labeled *citrin*, it was later called *hesperidin* or "vitamin P," the "permeabilitats vitamin." Rutin, an analogue of hesperidin, subsequently gained wide usage in an amazing array of unrelated diseases in which capillary fragility supposedly played a role. Johnson[28] in 1946 estimated that 1,300,000 pounds of rutin would be required annually.

The shakily founded early enthusiasm for rutin as a capillary cure-all prompted the American Medical Association Council on Pharmacy and Chemistry (1946)[9] to review the experience with hesperidin. This review reached the conclusion that "Carefully controlled experimental and clinical studies on this substance failed to substantiate the claims ad-

TABLE 1.—*Therapeutic Results Reported From the Literature.*

Treatment	Number of Patients	Percentage of Patients "Improved"
High protein diet[47]	6	67
Carbazochrome[29]	13	0
Lipotropics[15]	50	0
Cysteine[39]	Not stated	0
Cyanocobalamin[3]	Not stated	0
Alpha Tocopherol[10]	12	0
Testosterone[4]	40	0
Testosterone[45]	28	33
Androstenediol[21]	27	0
Estrogen[4]	20	0
X-irradiation of retina[48]	52	33
Trypsin[49]	18	0
Hesperidin[42]	22	23
Rutin[40]	36	22
Rutin[33]	12	42
Rutin[14]	25	0
Rutin[2]	40	25
Rutin[1]	32	0
Rutin[16]	10	0
Rutin[44]	20	0

From The Sansum Medical Clinic, Santa Barbara.

Presented before the Section on Internal Medicine at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

*References 4, 11, 33, 37, 42.

vanced," and expressed the hope ". . . that history will not repeat itself with rutin." This proved to be a vain hope indeed.

During the next four years a steady stream of reports† described results of rutin therapy in diabetic retinopathy which were anything but inspiring, and culminated in an exhaustive, independent evaluation of rutin published by the A.M.A. Council on Pharmacy and Chemistry in 1950.[7] The experiments showed it was unlikely that the flavonoids exert any specific chemical or therapeutic effect, or that they are even absorbed from the gastrointestinal tract.

Undaunted by all the weighty evidence of its worthlessness, rutin rolled on, and the present rate of production is a million dollars' worth per year, at the manufacturer's level.[27]

The pertinacity of the flavonoids and the claims made for them, including statements that they are ". . . supplementary therapy of value in virtually all diseased states and specific in action with respect to some"[38] led to a third Council report in 1957.[8] The evidence was again reviewed, with the conclusion that ". . . the flavonoids are of little or no value in the treatment of disease." It was pointed out that ". . . reluctance of individuals to publish negative findings has resulted in a more favorable literature than is deserving."

THE PRESENT STUDY

Prompted by the latter observation, we should like to present the results of our study with the newest of the flavonoids, CVP (citrus-vitamin P), in diabetic retinopathy. CVP* is not a compound of defined chemical structure, but a complex of water-soluble flavonoids which occur naturally in citrus peel and pulp. CVP was administered in a dosage of one capsule three times daily, each capsule containing 100 mg. of water-soluble flavonoid complex and 100 mg. of ascorbic acid. Many patients also received a lipotropic preparation which was considered to play no role in the results, since lipotropic compounds have previously been shown to be without effect in diabetic retinopathy.

Each patient was examined at intervals of three to six months, and the periods of observation ranged from three to thirty-six months. Serial funduscopic sketches were made, as an objective record of the changes which occurred, to avoid basing conclusions on subjective impressions by the examiners. Severity of the retinopathy was graded according to Wagener's classification,[8] and improvement was based on the disappearance of any lesion, either microaneurysm, exudate or hemorrhage, provided new lesions did not appear.

†References 1, 2, 12, 14, 16, 26, 33, 40, 44.

*Manufactured by U. S. Vitamin Corporation.

TABLE 2.—*Results of Citrus Vitamin P (CVP) Therapy in Diabetic Retinopathy.*

Retinopathy Group Grading (Wagener)	Number of Patients	Number Improved
0-I	9	4
II	10	2
III	4	1
IV	2	1
V	8	1
Total	33	9 (27%)

The results are set forth in Table 2. It is of interest that improvement occurred most frequently in the patients in Group O-I, in whom characteristically the early lesions of diabetic retinopathy may come and go in erratic fashion for several years.

In comparing the results with those obtained with other forms of therapy a striking fact emerged: No matter which treatment was used, "improvement," if it occurred at all, is usually reported in one-quarter to one-third of patients (Table 1). In our opinion, this represents the rate of spontaneous temporary remission which will be found in any sizable series of patients with diabetic retinopathy observed for limited periods.

On the basis of the evidence in the literature and our own experience, we believe that the role of flavonoids in the therapy of diabetic retinopathy can be summarized in a single word: None.

DISCUSSION

Late vascular damage has become the most important unsolved clinical problem in diabetes.[13] Therapy with diet and insulin has preserved diabetic persons from early death due to coma, and delivered them to a fate of almost inevitable blindness and death in uremia.

Prevention of diabetic vasculopathy is generally sought by the only means at hand: Meticulous control of the diabetes. There is still doubt in some quarters as to the efficacy of this approach.[49] Therapeutic attack on the problem of diabetic retinopathy is going forward on two main fronts. The first is based on the presumed role of pituitary and adrenal hormones. Circumstantial evidence supplied by the brilliant results sometimes observed after pituitary or adrenal ablation is quite compelling. Further support has come from the experimental production of diabetic retinopathy and glomerulosclerosis in alloxanized animals treated with steroids and pituitary extracts.[39]

Doubts regarding the etiologic role of the pituitary-adrenal axis have been raised by observations that retinopathy is uncommon in the steroid diabetes of Cushing's disease[43] and that it does occur in patients with hemochromatosis,[32] relapsing pancre-

atitis[25] and total pancreatectomy,[6] in whom diabetes is caused by a straight attack on the pancreas without other endocrine involvement.

There has long been a search for a compound capable of producing "medical hypophysectomy." Estrogen, testosterone, B-hydroxyprogesterone[30] and amphenone[24] have all been shown capable of suppressing adrenocortical activity, but not with a clinically acceptable degree of efficiency and safety. Recent experience with 9-a-fluoro-21-desoxy-Medrol,[31] a steroid devoid of antiphlogistic or metabolic activity in man except for suppression of adrenocorticotropin production, offers some hope that an effective pituitary suppressant may be at hand. This steroid is currently under evaluation in our laboratory.

The second therapeutic attack on diabetic vasculopathy is based on the premise that the basic abnormality is a derangement in lipid metabolism. It is common clinical experience that atherosclerosis occurs prematurely and with great severity in diabetic persons. However, cholesterol and phospholipid levels are not significantly different in diabetic persons than in matched controls. Furthermore, the most characteristic and uniquely diabetic lesions, retinal microaneurysms and nodular glomerulosclerosis, are neither common in atherosclerosis nor lipoidal in composition.[50]

Nevertheless, recent studies have disclosed abnormalities of lipid metabolism which may provide a sound basis for therapy. The content of SF 12-20 lipoproteins is elevated in persons with poorly controlled diabetes, and is even more distinctly increased in those with retinopathy.[43] Levels of esterified fatty acids rise and fall in parallel with the blood sugar in unstable diabetes,[23] and the metabolism of non-esterified fatty acids is abnormal even in cases of controlled diabetes.[5]

Studies are currently under way to evaluate the therapeutic effect of polyunsaturated "essential" fatty acids,[18] and preliminary results are said to be encouraging.

317 West Pueblo Street, Santa Barbara (Domz).

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Self-Healing Pseudocancers of the Skin

LAWRENCE M. NELSON, *M.D.*, Santa Barbara

• **It is believed that a group of self-healing tumors which clinically and microscopically may be confused with squamous cell carcinomas are all variants of one entity, although there are certain differences between the members of the group. The clinical, as well as the histologic evaluation of these tumors is necessary to differentiate them from true squamous cell carcinomas. Some should be treated for cosmetic purposes since the scars following self-healing may be more unsightly than those caused by treatment.**

A GROUP OF TUMORS which clinically and microscopically resemble squamous cell carcinoma, but which heal spontaneously without metastasis has been described under various titles.* The purpose of this paper is to point out the similarities and the differences between these various tumors, and to place them in proper relationship to each other and to squamous cell carcinoma. Excluded from this discussion are all pseudoepitheliomatous hyperplasias caused by infections, reactions to insect bites, ingestion of drugs, specific infiltrates such as the lymphomas, and the pseudoepitheliomatous hyperplasia that occasionally occurs around chronic ulcers. To facilitate the description of these tumors, they will be described under the following six headings:

1. *Keratoacanthomas,* which are the most common of the self-healing pseudocancers. Voluminous literature has appeared on these tumors. They were first described in 1917 by Gougerot[23] as verrucome. MacGormac and Scarff[31] in 1937 reported ten cases as molluscum sebaceum and clarified the clinical and microscopic features of the tumors. Rook and Whimster[37] in 1950 applied the term keratoacanthoma, described the condition in detail, and called attention to the spontaneous healing of the lesions. The presentations before the Tenth International Congress of Dermatology in 1952[38,42,44] attracted the attention of American dermatologists to these tumors. The first American report did not, however, appear until 1954.[30] The lesions usually occur on the glabrous skin of persons of the older age group, and may appear on the lip;[10,16,39] they have been reported as occurring in the teens.[46] The lesion is usually single and typically begins as a papule which enlarges rapidly in five to six weeks to a firm hemispheric nodule 1.0 by 2.0 cm. in diameter, with a central crater filled with horny material and occasionally covered with a scale. The nodule is usually elevated 0.5 to 1.0 cm. and is erythematous or of normal skin color (Figure 1). It is not fixed to the underlying structures. Regression usually begins in six to eight weeks and is complete in four to six months, leaving a scar.

2. *Tumor-like keratoses* was the descriptive term applied by Poth[35] to a group of tumors he observed that arose on the dorsa of the hands of a 45-year-old man after excessive exposure to sun. Clinically the tumors, as described by Poth, resembled squamous carcinoma and measured up to 2.0 cm. in diameter (Figure 2). They disappeared spontaneously in about eight months. The patient had a history of two similar lesions which appeared after exposure to sunlight, and which subsided spontaneously. Crater formation, so prominent a feature of keratoacanthoma, was less pronounced or absent. There was a great deal of difference of opinion as to the correct microscopic diagnosis in the case of Poth's patient (Figure 3). Of six competent pathologists who ex-



Figure 1.—Keratoacanthoma of two months' duration.

Chairman's Address: Presented before the Section on Dermatology and Syphilology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

*Verrucome, molluscum sebaceum, Kystes sebaces vegetants, keratoacanthoma, molluscum pseudocarcinomatosum, tumor-like keratoses, pseudorecidive, pseudoepitheliomatous reaction, multiple primary self-healing prickle-cell epitheliomas of the skin, pseudoepitheliomata of the skin, peculiar generalized epithelial tumors of the skin, benign epithelioma, multiple acanthomas, idiopathic pseudoepitheliomatous hyperplasia.



Figure 2.—Patient of Poth: Tumor-like keratoses.

pressed opinions, three made a diagnosis of carcinoma.† Fliegelman and Loveman[20] and New[34] presented reports of similar patients. All observers agree that exposure to sunlight must be the precipitating factor in the formation of these tumors.

3. *Postpodophyllin tumors.* Maxwell and Lamb[33] reported the occurrence of a tumor clinically resembling a rapidly growing squamous carcinoma after the application of podophyllin to keratosis surrounding an x-ray scar. The tumor disappeared in two weeks under bland treatment. Biopsy was not done. In another patient a similar lesion developed after the treatment of a basal cell carcinoma with podophyllin. Microscopically, pseudoepitheliomatous hyperplasia was found. Lamb[29] reported upon a patient who was treated by a physician who used 20 per cent podophyllin in compound tincture of benzoin for a case of dermatitis of the face, following which lesions developed that were clinically and microscopically keratoacanthomas. They disappeared while protected by an occlusive dressing. Herold and Nelson[25] reported one patient who had multiple elevated, erythematous lesions with crusted, punched-out centers that developed following the treatment of multiple keratoses and basal cell epitheliomas (Figure 4). Microscopically, the findings were those of keratoacanthoma and were so accepted by the panel on histology of the Pacific Dermatological Association (1956), although one section was reported as showing squamous cell carcinoma. All lesions spontaneously healed.

4. *Pseudorecidives* (pseudoepitheliomatous reaction following irradiation) may appear after intensive irradiation for cancer. They have been reported as occurring after Chaoul therapy,[15,22,26,27] deep therapy,[43] conventional therapy,[25] and radium therapy.[25,28] The tumors appear at the time the radiation

†R. C. Wanstrom, G. H. Belote and D. A. Todd made the diagnosis of carcinoma, while U. Wile felt that it was dyskeratosis and pronounced hyperkeratosis, and F. Weidman diagnosed it as a tumor-like keratosis. H. Montgomery called it an "exuberant verruca vulgaris resembling verruca accuminata."

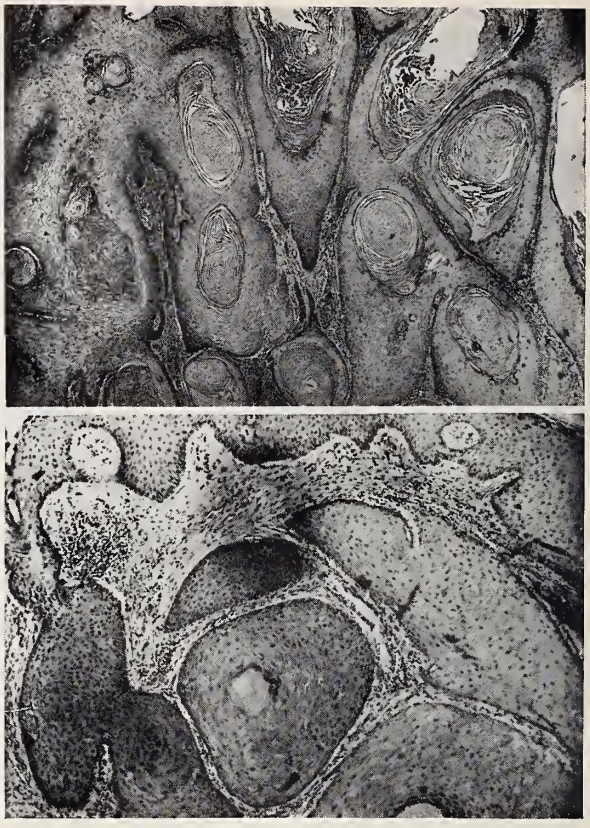


Figure 3.—*Above*, low power magnification of section of tumor-like keratosis of Figure 2. *Below*, high power magnification of section of same tumor.



Figure 4.—Multiple tumors occurring after application of podophyllin to superficial basal cell epitheliomas.

reaction is subsiding; the develop over a period of four to twenty days. There is a somewhat rolled border. The color is usually erythematous but may be slightly yellow or gray-brown. The tumors may be smooth (Figure 5) or may resemble verrucae senilis. Many fine miliary-like lesions are frequently observed in the area involved. The tumor may cover the entire area to which irradiation was applied, although more usually it is limited to some portion of the periphery of the treated area. At times, changes



Figure 5.—Pseudorecidive following treatment of basal carcinoma with radium. The lower lesion next to the vermillion lip is a mole.

occur on all or part of the previous location of the neoplasm for which the radiation was originally given. None of these tumors has a craterlike formation with a keratin plug such as is seen in keratoacanthoma, although in some lesions there is an elevated border and depressed center.

5. *Multiple primary self-healing squamous epitheliomas of the skin* were reported by Smith[40] in 1934. The patient was a miner, aged 23, who had lesions on his legs that had developed at age 16. The lesions came on as red macules which became papular, enlarged, ulcerated, and finally healed after six or more months, leaving pitted scars. New lesions appeared faster than the old ones healed. By 1948[41] the nose of the patient was destroyed, as was much of the soft tissue of the face. At the time of his death from meningitis at age 37[13] the patient had lesions of the anus, scrotum, and anterior abdominal wall. The daughter of this patient also had similar tumors.[13] Ayres[3] observed a patient (Figure 6) with these lesions from 1925 to 1957, the longest period of observation on record. He was 42 years of age when first observed in 1925 and at that time he had a smooth nodule about 1 cm. in diameter on the right side of the nose. He had had similar lesions previously. Tumors continued to develop and some of them ulcerated. Upon examination of tissue removed for biopsy microscopic features observed were compatible with a diagnosis of squamous carcinoma. Some lesions regressed spontaneously and some responded to treatment. The patient was last seen by Ayres in July, 1957; at that time he was free of cutaneous tumors but was very anemic. An internist examined him but did not find the cause of the anemia. Epstein and co-workers[18] reported upon a patient with lesion on the hard palate. Charteris[11] felt that one of his patients completely lost the capacity of self-healing, and that self-healing ability



Figure 6.—Patient of Ayres: Multiple primary self-healing squamous epitheliomas of the skin. Note active lesion on lip, and scars of healed lesions.

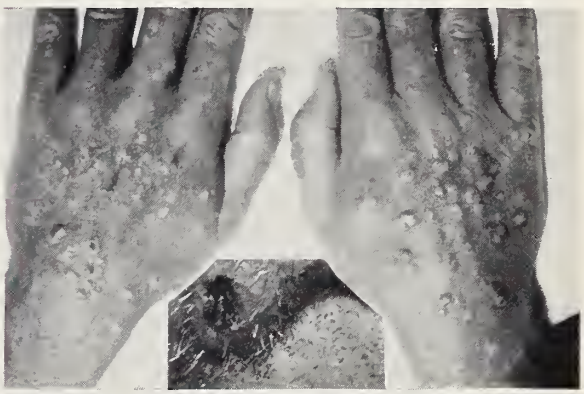


Figure 7.—Patient of Witten and Zak: Dorsa of hands showing innumerable small lesions. *Inset*, typical keratoacanthoma of upper lip.

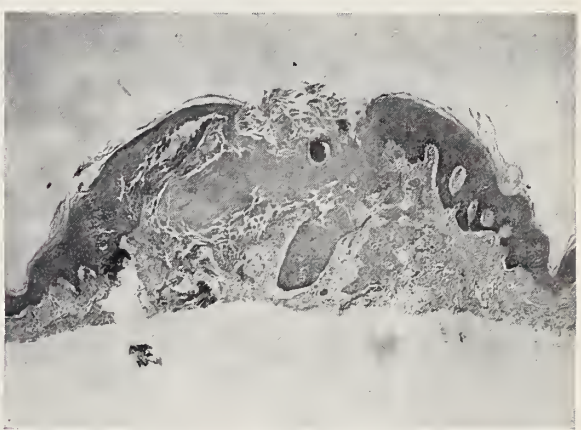


Figure 8.—Patient of Witten and Zak: Low power magnification of a papular lesion.

became feeble in another patient. A family history of similar tumors is common in these patients.

6. The patient described by Grzybowski[24] as having peculiar generalized epithelial tumors of the skin, and the patient Witten and Zak[45] reported as having multiple primary self-healing prickle-cell epitheliomas of the skin deserve special considera-

tion. These observers considered the lesions of the patients to be examples of multiple primary self-healing epitheliomas of the skin,[40] differing only in the number of lesions and (in Grzybowski's patient) in that the mucous membrane was involved. In both of the patients literally thousands of tumors developed.

Grzybowski's patient, a 57-year-old male mechanic, had about 40 tumors over the scapulae when first examined. New tumors appeared and within a matter of months the patient had hundreds of tumors. Individual lesions appeared as punctiform papules and then slowly increased in size. On top of each a slight depression appeared, sometimes with a little ulcer with a dry floor. The lesions increased to 0.5 cm. in diameter and then fell off, leaving a pitted scar. Grouping of papules made wart-like elevations. The cycle of each papule was four to eight months. On the oral mucosa were multiple white macules and coalescent papules. The palate was covered with a considerable number of wart-like papules. Microscopically, the lesions were squamous cell carcinomas originating from hair follicles. The ultimate fate of this patient has not been reported.

The patient of Witten and Zak (Figure 7) was a 49-year-old man with lesions resembling those of Grzybowski's patient except that some of the lesions were from 1 cm. to 4 cm. in diameter. The mucous membrane was not involved. Pruritus was present in both patients. Witten and Zak's patient died of a cardiac condition. No autopsy was permitted. Microscopically, the lesions were interpreted as showing squamous carcinoma (Figure 8).

DISCUSSION

All the tumors under consideration have several features in common which may make differentiation from true squamous carcinoma very difficult. Clinically and microscopically the similarity of the individual lesions to each other and to squamous cell carcinoma is remarkable. It has been pointed out that a microscopic differentiation of keratoacanthoma (which may serve as a prototype for this group of tumors) from squamous carcinoma may be difficult if not impossible.* The salient features of the differentiation have been pointed out in several excellent papers.[8,14,37,39] It is essential to correlate the clinical with the histologic features of the tumor in order to make a definite diagnosis. Whenever possible, the entire lesion should be available for study so that a vertical section may be made through the center of the lesion. For the most part, these tumors are elevated above the surface of the skin. There is usually a large crater filled with very friable material, and papillary projections of hyperplastic epithelium extend into the plug. The lesions, themselves, do not generally extend beyond the derma. The basal layer is usually intact but may be poorly defined and may be invaded by inflammatory cells; these inflammatory cells may also appear between the epithelial cells and are of great significance in determining the benign nature of the lesions.[8,14] Smith[40] demonstrated that the degree of histopathic activity in multiple self-healing squamous carcinomas varies with the age of the tumor. He observed the microscopic features of very active squamous carcinoma in a three-weeks-old tumor; then, at two months, the structure was that of well-differentiated squamous carcinoma; and at four months, in a practically healed lesion, only scar tissue and loss of the normal pattern of the coreum was found. Epstein and co-workers,[18] Rook and Whimster[37] and de Moragas and co-workers[14] also found that the resemblance to squamous carcinoma was strongest at the height of the growth of the tumor. It is possible that if sections were taken from any of these tumors at intervals, similar variations in the microscopic picture might be found.

The rate of growth of the tumors is out of all proportion to the microscopic activity (i.e., the rate of growth of a grade I squamous carcinoma is very low; it would take months for one to reach the size these tumors reach in a matter of weeks). The duration of the individual lesions is usually a matter of months. It is the rare lesion that persists more than eight months, and involution usually starts in three to four months. Although the individual lesions usually heal spontaneously, Charteris[11] observed one patient in whom the self-healing ability was apparently lost, and another in whom it became feeble.

The duration of the condition itself, as differentiated from the duration of the individual tumors in multiple self-healing squamous carcinomas and in Grzybowski or Witten and Zak tumors, lasts for the life of the patient, and in tumor-like keratoses lasts for the duration of excessive exposure to the sun.

Recurrences after removal of keratoacanthomas and multiple self-healing squamous carcinomas have been reported,[4,12,19] and metastasis from lesions which were typical keratoacanthomas has been reported also.[2] It remains to be proved whether these lesions were keratoacanthomas in which the self-healing ability was lost, or whether it was a question of missed diagnosis of squamous carcinoma in the first place.

The precipitating factors vary. The postpodophyllin pseudocancers, and the pseudorecidives after irradiation therapy have obvious precipitating causes. Keratoacanthomas can, of course, start at points of trauma, and there is considerable evidence that sun exposure may be one of the traumatic factors. Multiple lesions have occurred on a skin graft site,[9] on

*References 6, 8, 14, 21-36, 39, 46.

TABLE 1.—*Summary of Features of Various Categories of Self-Healing Pseudocancers.*

	Keratoacanthomas	F.S.*	G., W.-Z.†	Pseudorecidives	Podophyllin Keratoacanthomas	Tumor-Like Keratoses
Age at onset	6-7 Decade	Adolescent or Early Adult	Adult			Late Adult
Sex	Males Predominate	Males Predominate	Male			Male
Distribution	Exposed Areas	Generalized	Generalized			Exposed Areas
Spontaneous healing	Yes	Yes (Usually)	Yes	Yes	Yes	Yes
Scar formation	Usually	Usually	Usually	X-ray-damaged Skin	Treatment-damaged Skin	Yes
Precipitating factors	Sometimes Present	None	None	Irradiation	Podophyllin	Sun
Family history	None	Common	None			None
Duration of condition	Limited	Prolonged	Prolonged	Limited	Limited	Limited by Sun Exposure
Recurrence after removal	Reported	Reported	No	No	No	No
Mucous membrane involvement	Lip	1 Case	1 Case	None	None	None
Number of lesions	Usually Single	Multiple	Very numerous —Thousands—			Multiple

*As described by Smith.[10] †As described by Grzybowski and by Witten and Zak.

burns,[19] on eczematized dermatitis,[1] and on eczema of the hands.[5] Virus infection has been indicted,[19] but this theory has not been verified by other investigators.[30,32] Tumor-like keratoses are believed by many investigators to be a reaction to sun exposure, and are considered by some observers to be identical with keratoacanthomas. Individually, multiple benign self-healing epitheliomas clinically and microscopically are identical with keratoacanthomas. A special classification for them is warranted because of the early age of the patient at time of onset of the condition, the multiplicity of tumors and the persistence of the condition throughout the life of the patient. There is often a family history of similar tumors. The tumors described by Grzybowski[24] and Witten and Zak[45] were considered by those observers to be identical with multiple benign self-healing epitheliomas, and to differ with them only in the tremendous number of lesions. Grzybowski's[24] patient had lesions in the mouth, as did the patient of Epstein and co-workers.[19]

Table 1 summarizes the features of the various categories of self-healing pseudocancers.

Once the diagnosis is firmly established, the treatment of the individual lesions is necessary only for cosmetic purposes, since the scar of the lesion left to heal spontaneously is usually worse than that which results from treatment. The pseudorecidive after irradiation and the postpodophyllin pseudocancers need no treatment, for they already are situated on scars. For the other lesions, any form of complete removal is satisfactory. No means has been found to prevent the continued formation of multiple primary pseudocancers of the skin. In view of the report by Ephrain and Kaufman,[17] bismuth should be tried.

30 West Arrellaga Street, Santa Barbara.

ACKNOWLEDGMENT

I am indebted to D. O. Poth, M.D., for Figures 2 and 3, to Samuel Ayres, Jr., M.D., for Figure 6, to V. H. Witten, M.D., and F. G. Zak, M.D., for Figures 7 and 8, and to Walter Herold, M.D., for Figure 4.

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Can a Single Injury Cause Cancer?

ARDEN R. HEDGE, *M.D.*, Monrovia

• **In the absence of positive evidence that a single injury can cause cancer, the tendency is growing to award compensation to persons (particularly employees) with cancers alleged to have originated in trauma, even cancers which are generally conceded to be congenital in origin.**

Experimental attempts to induce cancer through trauma have been unsuccessful or doubtful in result. War-wounded persons, boxers and railroad accident victims have no higher incidence of cancer than other groups.

Physicians and others in a position to educate the public should strive to dispel the error that cancer following injury is demonstrably or even probably the cause.

IMHOTEP[3] WAS the first medical commentator, in a treatise written some five thousand years ago, to conclude that an injury was the cause of a tumor—characteristically, a tumor of the breast. Since that time there have been thousands of conflicting communications on this subject, most of them adding little to an understanding of it. Many conscientious investigators have tried to set up standards and restrictions for judging traumatic causes of cancer, yet there are remarkably few cases on record in which the evidence of this relationship seems at all acceptable in logic.

This presentation is limited to the question of whether a single injury, contrasted with multiple or chronic trauma, can be accepted as the cause of malignant development at or near the site. The legal implications of the question are obvious. One of the first authoritative discussions, that of Lowenthal[7] in 1895, observing that 385 out of 800 sarcomas were apparently related to trauma, was quoted in legal suits for many years afterward. Another widely quoted monograph was that of Lowenstein[6] in 1910. As early as 1926, Mock and Ellis[9] noted, regarding traumatic cancer, that ". . . with each succeeding year in the enforcement of the social legislation known as 'Employee's Accident Compensation' the question is being raised more frequently." They predicted that "every trauma occurring in a working man may eventually raise the question for arbitration or litigation." The following case report illustrates the trend they foresaw:

A 45-year-old employee of a manufacturing concern was struck a very light, glancing blow over the left side of the forehead by a sheet of tin. He reported the injury, and also a contusion of his hand, about a week later. The company nurse examined the forehead, found no break in the skin, and suggested no treatment. A month later, while being treated for another injury, he mentioned that the forehead itched slightly and felt uncomfortable. A small reddened area was noted, resembling other reddened areas on the patient's skin (he was red-haired), but again the nurse judged that there was no need for concern.

Four months later, when the patient went to the nurse for treatment of a respiratory infection he mentioned that the same area on the forehead was draining slightly. She referred him to the author. The lesion did not appear characteristically malignant, but biopsy indicated it was a basal-cell carcinoma. It was excised with a 3-cm. marginal area and replaced with a graft. The patient soon returned to work.

About a year later, although not handicapped or disfigured and with no evidence of recurrence, the patient sued his employer, charging that the nurse was negligent in not referring him to a physician earlier.

In defense, the employer presented as expert witnesses a pathologist and a dermatologist who gave clear, well-illustrated expositions of the known facts about development of basal-cell carcinoma. The author pointed out that since the lesion was diagnosable only on biopsy, the nurse could hardly be considered negligent in failing to refer the patient before definite symptoms appeared. The plaintiff's counsel, however, asked only one question of each testifying physician: "Are you being paid by the company to testify in their behalf?" Since the answer was "Yes," it was argued that the expert testimony was biased. The counsel then cited an obscure medical article, published some 20 years earlier in South America, reporting one case of cancer allegedly caused by an injury. The case then went to the jury, which after twenty minutes' deliberation awarded the plaintiff not the $25,000 he asked, but $35,000.

Such judgments are not the result alone of a feeling of sympathy for the underdog, or of a belief that industrial insurors can and should pay for any ailment that might possibly be connected with employment. Stewart,[12] after an extensive study of can-

Presented before the Section on Industrial Medicine and Surgery at the 85th Annual Session of the California Medical Association, Los Angeles, April 29 to May 2, 1956.

cers following a single injury (including the unfinished cases and records of Ewing[2]), made this observation: "As for medical testimony, it appears to me that, (1) Such testimony can be purchased at a price, or (2) Those individuals who testify are hopelessly ignorant of the commonly known facts of cancer pathogenesis. A doctor will state unequivocally that a single injury caused a cancer, yet he is somehow or other unaware of the tremendous amount of injury that he has induced at the operating table or even in giving injections. There are no cases on record where cancer resulted from operations or from setting fractures, or even from chiropractic manipulation, which sometimes can be quite traumatising." Stewart also believed that referees often are guilty of practicing sociology rather than scientific medicine. They are so frightened of a possible injustice to the claimant that they tend to make awards even in the face of completely incompetent evidence.

Another noteworthy case exemplifying the confusion about traumatic carcinogenesis was reported by Davis[1]: A state government employee, while riding in an automobile over a rough spot in a road, bumped the side of his face. What appeared to be a hematoma developed. Four months later the neck nodes became enlarged and biopsy disclosed the presence of adenocarcinoma. The patient refused to have operation and was treated elsewhere with arsenic paste, which caused extensive sloughing. Ten months later the patient died of extensive metastasis, and the family sued the state government. Although the plaintiffs' physician witnesses did not state the site of primary growth or explain how injury to skin or bone could cause adenoma, compensation was granted.

Rixford[10] reported the more controversial case of a 17-year-old boy who stumbled and fell while fighting a forest fire, violently striking his right breast on a tree stump. Swelling and soreness persisted, and on the seventh day the patient consulted a physician, who reported severe contusion and ecchymosis, and also enlarged nodes in *both* axillae. The swelling gradually subsided except for a lump 2 cm. in diameter directly under the nipple. Three months later this began to enlarge and was excised but unfortunately was not preserved. More than two years later a painful mass developed in the *left* axilla and on excision was found to be metastatic carcinoma. The patient died and his family sued for compensation. Ewing,[2] on reviewing the data, considered this a probable case of traumatic mammary cancer. There was no evidence, however, as to whether the tumor had preceded the injury, or whether the excision itself might have caused the malignant development. In fact, it could not even be proved (for lack of biopsy) whether the cancer was mammary or was metastatic from some other site. The bilateral lymph node enlargement, noted seven days after the injury, certainly could have been due to a preexisting neoplasm.

Theim[14] was one of the first to submit criteria for tumors considered to be traumatic in origin:

1. There must be proof of an accident;

2. The injury must be severe enough to be effective;

3. The time interval must be sufficient for development of a neoplasm (at least eight days);

4. The region affected need not be the exact place of the injury but must be related to it.

To these postulates Ewing[2] added a fifth: Integrity of the part prior to the accident must be proven. Unfortunately, these theoretically valid rules have had little practical effect on the problem.

There is no convincing experimental evidence that a single injury can cause cancer. The only study indicating otherwise is that of Slye,[11] who in 1917 described 87 sarcomas in mice, in 11 of which the tumor was believed to have arisen at the site of previous injury. On close scrutiny, though, the evidence presented is not very convincing and many attempts by other competent investigators to repeat the experiments have been unsuccessful. Lubarsch[8] experimented extensively with trauma and concluded that only repeated trauma could have any possible connection with neoplastic growth. Included in his studies were many severe traumas to existing malignant lesions, following which he found no increase in mitotic figures.

Several large studies of injured persons have not produced evidence of any greater proportion of cancer among the injured. This has been found true of the United States and other countries recently at war, compared with noncombatant nations, and also of the injured persons themselves. The only exception was in the case of open fractures, followed by osteomyelitis of many years' duration, in which the chronic irritation seemed to be carcinogenic.[4] Lewy[5] found that at the average age of 50 years the incidence of cancer (1:700) was the same among persons who had been injured as in the general population. Metz[9] observed that a railroad company which had 175,000 accidental injuries (10 per cent of them fractures) over a period of 20 years was never sued on the ground that cancer developed from injury. The same was true of another railroad with 47,000 injuries. Nilsson,[10] however, reported four cases of cancer (all sarcoma) charged to injuries on another railroad.

Regarding traumatic causation of various types of cancer, published observations may be generalized as follows:

Squamous-cell carcinoma has rarely been ascribed to trauma. Tongue bite was considered a cause in one case, yet there is no record of cancer of the tongue ever developing in an epileptic person, although it is known that such persons frequently bite their tongues during seizures.

Cancer of the breast has been considered by some investigators as due to trauma in 1 to 25 per cent of cases, but fat necrosis has never been reported as the primary lesion.

Cancer of viscera has been charged to trauma in several legal suits, but no awards have been made. In one case lymphosarcoma of the stomach was said to have developed five months after injury, but this condition has never been reported in professional boxers, who frequently are severely pummelled about the abdomen.

Hypernephroma following injury has been recorded in a few instances, although it is generally established that this condition originates in a congenital rest.

Testicular tumor also is usually due to a congenital defect. Several doubtful cases of traumatic origin have been reported.

Brain tumor has been ascribed to trauma in a few cases, but not in the many carefully studied cases of brain injury received in war.

Sarcomas, either in bone or in soft tissue, constitute the largest class of traumatic tumor, but chronic irritation was more often the cause than a single injury. It is noteworthy that no sarcomas are reported as having resulted from exostosis.

More recent studies of cellular division, as Swann[13] recently pointed out, have shown with reasonable certainty that a long time elapses between the origin of a malignant growth and clinical manifestation of it. It has been stated that each cell division requires five to ten days, and that at least 200 cell divisions are necessary before a tumor reaches the size of 1 to 2 cm. If these data are correct, a tumor would have to develop for about 200 days before being noticeable on close examination and in many sites would have to grow for a year before reaching visible size. This estimate would invalidate many previously held ideas and many decisions regarding traumatic origin of cancers, which in most reported instances were noted a few weeks after injury.

Although the cause of cancer itself is not known, some casual associations are so clear and so well documented that they may be accepted. Not so in the case of single trauma, for which neither experimental nor consistent clinical evidence is available. Nevertheless, the belief in trauma as a cause of cancer is widespread and is fostered by the indefinite opinions sometimes expressed by physicians treating or testifying about injuries. A contrary educational effort is needed, by physicians in their daily contacts, by medical writers and by the American Cancer Society, to dispel this error.

600 West Foothill Boulevard, Monrovia.

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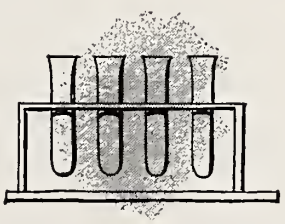
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California MEDICINE

For information on preparation of manuscript, see advertising page 2

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EDITORIAL

A Survey of *California Medicine*

CARRYING FORWARD a plan of self-examination to determine how close it comes to being the kind of journal its readers would like to have, CALIFORNIA MEDICINE at mid-year sent a questionnaire to an unselected 10 per cent of the members of the California Medical Association in each county society. The questions were designed to find out what kind of material would best serve the wishes of the readers and how they would like to have it presented.

Of 1,600 questionnaires mailed out, 788 were returned, answered in part or in full. Some of the questions were answered by a large majority of the respondents; some were given little attention.

From the tally of response to six of the questions that were answered not only by a large majority of respondents but either preponderantly "yes" or preponderantly "no," these general conclusions can be drawn: (1) Subscribers do read CALIFORNIA MEDICINE—selectively for the most part; (2) their main interest is in scientific articles; (3) they would like to have more articles on clinical medicine; (4) they find CALIFORNIA MEDICINE easier to read than other medical journals; (5) they like and would not change the general make-up and appearance; and (6) they do read the advertisements, some pretty fully, some cursorily, some selectively. The tally of answers on these six points was as follows:

	Yes	*No*
1. Do you read CALIFORNIA MEDICINE?	*485	30
Pretty fully	113	78
Cursorily	149	106
Selectively	*551	31
2. If you read selectively, is your interest mainly in scientific articles?	*580	19
(other choices were given—Case Reports, Editorials, C.M.A. business, book reviews)		
3. Would you like to see another kind or additional material? If so, which of the following (here nine choices were given). The answer most consistently given was:		
More articles on clinical medicine	407	79
4. Comparing CALIFORNIA MEDICINE with other journals do you consider it easier to read?	443	55
5. Is the general make-up and appearance pleasing to you?	607	44
Do you believe it would be more interesting if it were made dressier?	41	605
6. Do you read the advertisements in CALIFORNIA MEDICINE?	281	71
Pretty fully	60	60
Cursorily	323	80
Selectively	281	82

*In several instances, the answers to one sub-question exceeded the answers to the general question, the respondent apparently intending to let the fact that he answered a sub-question indicate his answer to the main question.

In some places there appeared to be inconsistencies in the tallies. For example, the number of respondents who replied that they read the journal "selectively" (551) exceeded the number (485) who replied "yes" to the principal question, "Do you read CALIFORNIA MEDICINE?" Moreover, a number of respondents chose two affirmative answers in the group, indicating that they read "pretty fully and selectively" and others "cursorily and selectively." These phenomena were noted also in the replies regarding advertising. There were, for example, only 281 "yes" replies to the question, "Do you read the advertisements?" Yet the total of answers to the three choices—"pretty fully," "cursorily," "selectively"—was 664, a rather high proportion of the 788 questionnaires returned. Moreover, in the advertising category the "yes" answers far exceeded the "no" answers.

In addition to the already mentioned six points on which the answers appeared pretty conclusive, there were a number of other questions that were answered in sufficient volume and in such a way that the answers may be considered, if not commanding, at least directive. For examples: There was a 2 to 1 majority against "fewer articles by California physicians and more by authors from elsewhere"; and

there appeared to be a demand for more articles on basic medical science, for clinical-pathological conferences, for review articles, for articles on medical economics and for scientific editorials. Contrariwise, the answers were almost 2 to 1 against more detailed reporting of C.M.A. activities.

One hundred ninety-eight of the respondents said they were in general practice; 571 said they specialized. This ratio of roughly 1:3 is about in line with the proportions of general physicians and specialists in the state, according to data from the California Academy of General Practice.

Following are the questions that were asked with the tally of answers:

QUESTIONNAIRE FROM "CALIFORNIA MEDICINE"

	459	312
To how many medical journals do you subscribe?	1 2 3 4	5 6 7 more
	Yes	*No*
Do you read *California Medicine?*	485	30
Pretty fully	113	78
Cursorily	149	106
Selectively	551	31
If you read selectively, is your interest mainly in:		
Scientific articles	580	19
Case Reports	234	95
Editorials	183	119
Medical Association business	198	127
Book reviews	73	148
Would you like to see more of another kind or additional material?		
If so, which of the following:		
Fewer articles by California physicians and more by authors from elsewhere	128	268
Fewer articles from C.M.A. Annual Session and more from other sources	226	182
More articles on basic medical sciences	239	159
More articles on clinical medicine	407	79
Clinical-pathological conferences	207	167
Articles on medical economics	348	118
Review articles	275	117
More detailed reporting of C.M.A. activities	114	220
Scientific editorials	220	131
Other kinds not listed here (please say what kind at foot of page)		
Comparing *California Medicine* with other journals, do you consider it:		
Easier to read	443	55
Harder to read	64	106
Is the general make-up and appearance of *California Medicine* pleasing to you?	607	44
Do you believe it would be more interesting to you if it were made dressier?	41	605
If you would like to see it dressier, would you at considerable increase in cost:		
Use higher quality paper	4	338
Use more illustrations	80	180
Use color for eye-appeal	38	177
Do you read the advertisements in *California Medicine?*	281	71
Pretty fully	60	60
Cursorily	323	80
Selectively	281	82
How would you rank the quality of advertising in *California Medicine* with that which appears in other journals you read?		
Same	548	30
Lower	35	71
Higher	65	81
Would you either increase or decrease any of the present sections?		
If so, which—	*Increase*	*Decrease*
Original articles	301	49
Case Reports	139	149
Editorials	129	114
C.M.A. Section	98	144
News and Notes	222	125
Book Reviews	51	224
Is your practice general or specialized?	GEN'L. 198	SPEC'L. 571
Any additional comment?		

California MEDICAL ASSOCIATION

NOTICES & REPORTS

C.M.A. Executive Director

In a move toward furthering the service of the California Medical Association's internal organization to its 17,000 members, the council has appointed Mr. Howard Hassard as executive director.

Mr. Hassard will combine his new post with that of legal counsel which he and his firm have held for the past 41 years. As executive director he will devote only as much time as is needed to coordinate the many activities of C.M.A. which, according to all population estimates, is destined to become the largest state medical association in the nation within the next five to ten years.

All other members of C.M.A.'s executive staff, according to the Council, will continue in their present positions.

Departmentalization and other changes in organizational structure that have been gradually worked out over the past year or more, in line with recommendations that were made by a management consultant firm, have made it necessary to have one person through whom all the Association's activities are coordinated.

It was felt that the new executive director came ready-made for the job. Not only has he been constantly in touch with the aims, the attitudes and the problems of the Association for more than 20 years, but he knows and has worked with the office personnel and with many of the elected and appointed officials of the organization. Hence he has a useful acquaintance with the capabilities and aptitudes of most of the people with whom he will regularly work.

Mr. Hassard is legal counsel for other medical organizations whose interests are related to those of C.M.A. He is retained in that capacity by California Physicians' Service, San Francisco Medical Society, the Alameda-Contra Costa Medical Association, and San Mateo County Medical Society. He is general counsel of Blue Shield Medical Care Plans and serves as legal advisor to a number of medical specialty societies. He is also legal counsel for the American Association of Blood Banks and local blood banks in California.

A graduate of the University of California at Berkeley in 1931, Mr. Hassard received his degree in law from Boalt Hall on that campus in 1934. He was associate editor of the *California Law Review* in the years 1932-34.

ANNUAL REPORTS
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In Memoriam

Birkenstock, Carl F. Died in San Diego, November 9, 1958, aged 61. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1923. Licensed in California in 1923. Doctor Birkenstock was a retired member of the San Diego County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Clemens, Harry H. Died August 14, 1958, aged 48. Graduate of the University of Louisville School of Medicine, 1937. Licensed in California in 1942. Doctor Clemens was a member of the Los Angeles County Medical Association.

✣

Foote, Frederick S. Died in San Francisco, November 9, 1958, aged 61, of coronary thrombosis. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1925. Licensed in California in 1925. Doctor Foote was a member of the San Francisco Medical Society.

✣

Gallivan, Thomas H. Died in Orange, October 14, 1958, aged 73. Graduate of Yale University School of Medicine, New Haven, Connecticut, 1909. Licensed in California in 1941. Doctor Gallivan was a member of the Orange County Medical Association.

✣

Gilbert, William Paul. Died in San Francisco, August 7, 1958, aged 55, of coronary occlusion. Graduate of College of Medical Evangelists, Loma Linda-Los Angeles, 1937. Licensed in California in 1937. Doctor Gilbert was a member of the San Francisco Medical Society.

✣

Glickman, Milton. Died October 7, 1958, aged 43. Graduate of Stritch School of Medicine of Loyola University, Chicago, Illinois, 1940. Licensed in California in 1941. Doctor Glickman was a member of the Los Angeles County Medical Association.

✣

Keith, Charles F. Died in Colusa, November 5, 1958, aged 63, of heart disease. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1921. Licensed in California in 1921. Doctor Keith was a member of the Yuba-Sutter-Colusa County Medical Society.

✣

Koch, George W. Died in Anaheim, October 22, 1958, aged 79. Graduate of Rush Medical College, Chicago, Illinois, 1904. Licensed in California in 1937. Doctor Koch was a retired member of the Orange County Medical Association and the California Medical Association and an associate member of the American Medical Association.

✣

McAllister, Oscar O. T. Died in Springville, November 17, 1958, aged 73, of coronary thrombosis, due to coronary heart disease. Graduate of Oakland College of Medicine and Surgery, 1913. Licensed in California in 1913. Doctor McAllister was a retired member of the Alameda-Contra Costa Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Matousek, William J. Died in Glendale, November 21, 1958, aged 69, of a coronary occlusion. Graduate of Rush Medical College, Chicago, Illinois, 1921. Licensed in California, 1934. Doctor Matousek was a member of the Los Angeles County Medical Association.

✣

Mayers, Morton M. Died in Los Angeles, November 20, 1958, aged 54. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1930. Licensed in California in 1930. Doctor Mayers was a member of the Los Angeles County Medical Association.

✣

Mendenhall, Arthur Junius. Died November 2, 1958, aged 54. Graduate of Marquette University School of Medicine, Milwaukee, Wisconsin, 1937. Licensed in California in 1938. Doctor Mendenhall was a member of the Los Angeles County Medical Association.

✣

Mitchell, Charles Otis. Died in Clovis, November 23, 1958, aged 79. Graduate of University of Colorado School of Medicine, Denver, Colorado, 1907. Licensed in California in 1907. Doctor Mitchell was a retired member of the Fresno County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

Moore-Freshour, Ina. Died November 7, 1958, aged 68. Graduate of Chicago College of Medicine and Surgery, Illinois, 1914. Licensed in California in 1940. Doctor Moore-Freshour was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Nelson, Lorin Gordon. Died November 9, 1958, aged 55. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1932. Licensed in California in 1934. Doctor Nelson was a member of the Los Angeles County Medical Association.

✣

O'Connor, Robert Emmett. Died in Beverly Hills, November 16, 1958, aged 63. Graduate of St. Louis University School of Medicine, Missouri, 1923. Licensed in California in 1924. Doctor O'Connor was a member of the Los Angeles Medical Association.

✣

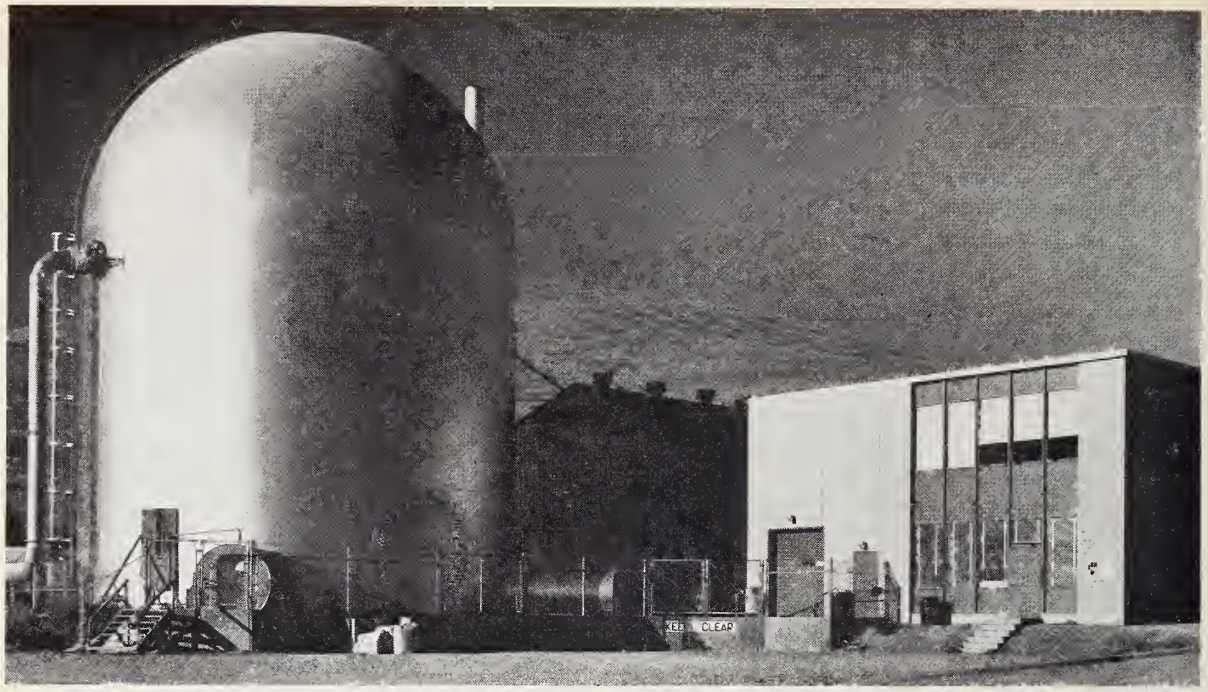
Portis, Richard A. Died in Boston, Massachusetts, November 4, 1958, aged 35, of pyelonephritis. Graduate of Western Reserve University School of Medicine, Cleveland, Ohio, 1950. Licensed in California in 1952. Doctor Portis was a member of the Los Angeles County Medical Association.

✣

Russell, Paul Livingston. Died November 17, 1958, aged 42. Graduate of University of Minnesota Medical School, Minneapolis, 1944. Licensed in California in 1944. Doctor Russell was a member of the Los Angeles County Medical Association.

✣

Seymon, Max Andre. Died November 1, 1958, aged 64. Graduate of Johann Wolfgang Goethe-Universitat Medizinische Fakultat at Frankfurt-am-Main, Prussia, 1921. Licensed in California in 1938. Doctor Seymon was a member of the Los Angeles County Medical Association.



1959 ANNUAL SESSION HIGHLIGHT

VALLECITOS ATOMIC LABORATORY TOUR

Tuesday, February 24, 1959

The second general meeting of the CMA 1959 Annual Session will be given over to a fascinating tour through the nation's largest privately financed atomic research facility. You will see General Electric Company's Vallecitos Boiling Water Reactor doing constructive, peace-time work. The reactor is being used with the Pacific Gas and Electric Company to generate electrical energy—for sale. Here is an opportunity to become better acquainted with one of the marvels of our time. A lecturer will explain what you see as the tour progresses, and will answer your questions. Luncheon at the Old Hearst Ranch and bus fare are included in the price of the tour.

LUNCHEON SPEAKERS:

Mr. NORMAN R. SUTHERLAND, *President, Pacific Gas and Electric Company*
Dr. RALPH D. BENNETT, *Manager, Vallecitos Atomic Laboratory*

YES! I want to tour the Atomic Laboratory. Send me _____tickets. My check for $_____ ($5 per ticket) is attached.

Name_____

Street_____

City_____State_____

ADVANCE TICKET SALES TO CMA MEMBERS ONLY

APPLICATION FOR HOUSING ACCOMMODATIONS

FOR YOUR CONVENIENCE in making hotel reservations for the coming meeting of the **California Medical Association,** February 22 to 25, 1959, San Francisco, hotels and their rates are at the right. Use the form at the bottom of this page, indicating your first and second choice. Because of the limited number of single rooms available, your chance of securing accommodations of your choice will be better if your request calls for rooms to be occupied by two or more persons. **All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure; also names and addresses of all occupants of hotel rooms must be included.**

ALL RESERVATIONS MUST BE RECEIVED BEFORE: FEBRUARY 1, 1959

***Note:* The House of Delegates will convene at the Sheraton-Palace Hotel; all Scientific Sessions and Exhibits will be at the Civic Auditorium.**

Eighty-eighth Annual Session
CALIFORNIA MEDICAL ASSOCIATION
San Francisco, California
FEBRUARY 22-25, 1959

HOTEL ROOM RATES *

	Single	Twin Beds	Suites
SHERATON-PALACE (HEADQUARTERS)			
Market at New Montgomery	8.50-16.00	12.50-20.00	20.00-100.00
FAIRMONT			
950 Mason	12.00-20.00	16.00-24.00	37.00- 66.00
MARK HOPKINS			
999 California	14.00-18.00	18.00-22.00	32.00- 60.00
ST. FRANCIS			
Powell at Geary	10.00-22.00	15.00-24.00	26.00- 75.00
SIR FRANCIS DRAKE			
450 Powell	10.00-14.00	15.00-20.00	32.00- 40.00

***The above quoted rates are existing rates but are subject to any change which may be made in the future.**

CALIFORNIA MEDICAL ASSOCIATION
450 Sutter Street—Room 2000
San Francisco 8, California

Please reserve the following accommodations for the 88th Annual Session of the California Medical Association, in San Francisco, February 22 to 25, 1959.

Single Room $..... Twin Bedded Room $.....

Small Suite $..... Large Suite $..... Other Type of Room $.....

First Choice Hotel..... Second Choice Hotel.....

ARRIVING AT HOTEL (date)..... Hour:..... A.M..... P.M. } Hotel reservations will be held until

Leaving (date)..... Hour:..... A.M..... P.M. } 6:00 P.M., unless otherwise notified

THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

.....

.....

.....

.....

Individual Requesting Reservations—Please print or type Delegate?..... Alternate?.....

Name..... County.....

Address..... City and State.....

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

CALIFORNIA DID NOT HAVE an epidemic of poliomyelitis in 1958, and in fact had one of the lowest rates on record. Paralytic poliomyelitis was reported at a rate of about one case per 100,000 population, compared with 1.5 in 1957, 8.2 in 1956, 5.6 in 1955 and 16.8 in 1954. In 1948, the big epidemic year, the rate was about 30.

In 1958 about 250 persons had this paralyzing disease. Early analysis of these cases shows that two-thirds occurred in persons under 20 years of age and one-half of the cases in persons under 20 were in persons under five years of age. Almost three-fourths of the cases in those over 20 years of age occurred in the group between 20 and 30 years.

In approximately 87 per cent of the paralytic cases the patient had not been adequately vaccinated. This fact, together with other evidence, lends further confidence to estimates of the high effectiveness of proper vaccination and points to the remaining problem of completion of the vaccination of California's population.

During the last year there has been no question as to the safety of the vaccine and its efficacy is holding up better than indicated a year ago.

What is the status of poliomyelitis vaccination among the people of California? A careful survey on a household interviewing basis for a representative sample of Californians during April-June of this year revealed that more than one-half (56 per cent) of all children under six had not been adequately vaccinated, and one-third of them had received no vaccine at all. The age group from 6 through 14 shows the best record; almost two-thirds of them have received three shots, and fewer than one-sixth had had no vaccine at all. The group from 15 to 40 years of age is even less well vaccinated than the group under 6, since more than two-thirds of them have not been adequately vaccinated and almost half of them have received no vaccine.

The most frequent reasons given for not seeking, or completing vaccination, were, "Haven't bothered," "Just neglected to get shots," or "Too busy." Some mentioned "expense." The majority of those who mentioned "expense" were in the lower income group with an annual family income of less than $5,000.

The Salk vaccine protects persons to a fairly high degree against paralysis, but it does not prevent the movement of poliomyelitis virus in the community. Thus, whatever cyclic factors there are that produce "high" and "low" years for poliomyelitis can continue to operate and show their effects largely in the unvaccinated population. If a poliomyelitis season like that of 1948 should occur in the unvaccinated population of California in 1959, we might expect to have an epidemic and some 5,000 cases of poliomyelitis. Something like this seems to have occurred in Detroit last year, and it could happen in our large metropolitan areas also.

The survey reported above is for the state as a whole. It remains for the local communities to establish the facts about vaccination status in their populations, so as to be able to consider programs directed at the core of the problem. Such measurement efforts have been made in many communities in California not only for poliomyelitis vaccination but also for other important vaccinations and immunizing procedures against smallpox, diphtheria, pertussis and tetanus, and have proved very helpful in planning local action programs.

Statewide indications are that vaccine has been moving into California unevenly through 1958. About 3.5 million doses were shipped in, with some indication of a low in May and a peak in July. Approximately three-fourths of the total amount was shipped to commercial outlets, and the remaining one-fourth to "public agencies."

Since the licensing of the Salk vaccine in 1955, 18 million doses have been shipped into California. About 27 million doses would be required to have three inoculations for California's population under 40 years of age. It is apparent that we are at least 9 million inoculations short of this goal, and at last year's pace it will require at least three more years to establish this basic protection.

Concentration on the particular target groups mentioned above might make community efforts more efficient in building levels of protection fastest where they are needed most. The State Health Department and other statewide and national health and medical agencies are interested and concerned in helping local communities achieve maximum protection against this crippling disease.

For many years physicians in California have been cooperating with the State Department of Industrial Relations by submitting the required "Doctor's First Report on Work Injury" for each work-connected injury or disease receiving treatment.

When these reports concern occupational disease they are sent to the State Health Department, where they serve as a source of statistical data. In spite of certain limitations these data comprise the best estimates of the occurrence of occupational disease available for any state in the nation.

The "'First Report" is submitted after the first examination of the patient and serves as means of notifying insurance carriers and state agencies that a work-connected injury or disease may have occurred.

However, for occupational disease the diagnosis on the report is sometimes a tentative one and may not necessarily reflect the final diagnosis. For this reason, the State Health Department in cooperation with the State Department of Industrial Relations is making a special study to determine how the diagnosis on the first report of work injury compares with the final diagnosis.

For this study occupational disease reported as occurring in October 1958 is used as a basis, and physicians who submitted those reports will receive an abstract of their original and will be asked to answer the following questions: Was the patient seen again after your first examination? Do you have any further information about the accident or exposure? Is the diagnosis above your final diagnosis? Is your present opinion that the condition was work-connected?

The replies will be held confidential and their use will be for statistical purposes only. This study of the relative accuracy of reported occupational disease will help in assessing the quality of the available statistics. Since accurate statistics are basic tools in the direction of public health programs for the prevention of occupational disease. it is important to have a measure of the relative accuracy and completeness of available sources.

* * *

Light winds, higher than normal temperatures and stable air conditions combined over much of the state last fall to cause high levels of air pollution.

As a result of these persistent conditions more smog was experienced in Los Angeles and the San Francisco Bay area than at any other period during the last two years.

Meteorological factors appeared to be particularly favorable for smog this year and, as a result, frequent and severe attacks were experienced in the metropolitan regions, a sharp contrast to the corresponding period last year.

Los Angeles, which had only one smog alert in 1957, had four last fall. Restricted visibility and eye irritation were experienced in the San Francisco Bay area during the same period. San Diego and Riverside counties also reached peak or near peak smog values.

One of the most significant findings was that oxidant values in Central Valley communities were also high. In Sacramento, high concentrations of oxidants on several days were associated with reduced visibility and reports of eye irritations, the first such definite evidence of smog that has been observed in the Central Valley.

* * *

The State Department of Public Health is maintaining a close watch on influenza occurrence in California through a statewide surveillance network which will provide immediate evidence of an increase in respiratory illness.

Eight local health departments are cooperating in the surveillance, collecting weekly data during the influenza season on industrial and school absenteeism rates and other information.

There is no indication at present that major epidemic of influenza such as that of last year will occur in California during the winter and spring months. However, some influenza will undoubtedly be present and, due to the widespread dissemination of the new Asian strain of virus during the recent epidemic, there may be a substantial number of cases.

Special field and laboratory studies will be done in areas where localized outbreaks of influenza-like illness occur. Cooperating in the surveillance network are the local health departments in the counties of San Diego, Los Angeles, Fresno, Monterey, Alameda, Butte, Humboldt-Del Norte and Shasta.

* * *

Physicians desiring further details concerning any of the items may direct inquiries to the California State Department of Public Health, 2151 Berkeley Way, Berkeley 4.

NEWS & NOTES

NATIONAL • STATE • COUNTY

BUTTE

Dr. Donald Hewitt, director of the county hospital in Butte County, has been appointed health officer pro tem, replacing Dr. Garold L. Faber who is now Health Officer of the Fresno County Health Department.

LOS ANGELES

Dr. William F. Quinn became president of the Los Angeles County Medical Association at the beginning of this year, succeeding Dr. Lewis T. Bullock, whose term expired at the end of 1958.

Others elected were Dr. Angus C. McDonald, vice-president; Dr. Gerald W. Shaw, secretary-treasurer; Drs. Bullock and Lyle G. Craig, trustees.

* * *

The second postgraduate **seminar on psychiatry in general practice** of the Southern California Psychiatric Society, a district branch of the American Psychiatric Association, which is held in conjunction with the General Practice Section of the Los Angeles County Medical Association is scheduled for Saturday and Sunday, January 31 and February 1, at the Los Angeles County Medical Association auditorium, 1925 Wilshire Boulevard, Los Angeles.

Registration will be open to all qualified physicians and credit will be given for attendance in Category II of the American Academy of General Practice.

Further information and particulars may be obtained from Southern California Psychiatric Society, 427 N. Camden Drive, Beverly Hills.

SAN FRANCISCO

The fifth annual western regional meeting of the **American Group Psychotherapy Association** will be held April 2-3, 1959, in San Francisco, at the Sheraton-Palace Hotel. The announcement of the meeting said that symposia, workshops, and general sessions will discuss such subjects as group counseling in a state prison, group therapy programs for family agencies, group psychotherapy for criminal offenders, family group therapy, therapeutic techniques in adolescents' groups and the recently developed transactional analysis. Further information about the meeting can be obtained from Dr. Donald A. Shaskan, Western Representative, at the Veterans Administration Mental Hygiene Clinic, 49 Fourth Street, San Francisco 3.

* * *

The annual dinner meeting of the San Francisco Chapter of the **Pan American Medical Association,** honoring the consular representatives of the American Nations and visiting Canadian and Latin-American physicians and students, was held at the Bohemian Club, Saturday, December 6, 1958. Officers elected for the ensuing year were: Dr. Fernando G. Gomez, president; Dr. Paul G. Fuerstner, first vice-president; Dr. J. Randolph Sharpsteen, second vice-president; Dr. Ray C. Atkinson, treasurer; Dr. John W. Ashford, secretary; and Dr. Charles Pierre Mathé, chairman, regional administrators. Dr. Knox H. Finley and Dr. Stephen C. Sitter were named to vacancies on the association's board of administrators.

* * *

Appointment of **Dr. Alan K. Done** as assistant professor of pediatrics at Stanford Medical School was announced recently by President Wallace Sterling. Dr. Done has carried out wide research on rheumatic fever in children and on the general effect of salicylates and their derivatives on the human body. He was formerly assistant professor of pediatrics at the University of Utah.

SANTA CLARA

Dr. Paul V. Morton of San Jose was elected president-elect of the Santa Clara County Medical Society at the organization's membership meeting in November, and at the annual meeting of the society in December Dr. Edward Liston of Palo Alto was installed as president, succeeding Dr. J. Frederic Snyder of Campbell.

Elected vice-presidents were Drs. Clyde L. Boice of Palo Alto, J. Allison Cary of Morgan Hill and Edgar La Vague of Los Gatos. Dr. Joseph Giansiracusa of San Jose was elected secretary and Dr. Raymond N. Olson was reelected treasurer.

TULARE

Dr. Clark M. Richardson, formerly acting medical director of communicable disease control for the Los Angeles City Department of Health, became Tulare County health officer at the first of the year. He was appointed by the board of supervisors at a meeting in November.

GENERAL

Three outstanding organizations for the advancement of medical knowledge will hold meetings in Carmel in the period January 28 to 31, 1959. They are:

Western Association of Physicians, which will meet Wednesday morning, January 28 and Friday afternoon, January 30. (Further information available from Dr. Joseph Ross, UCLA Medical Center, Los Angeles 24.)

Western Society for Clinical Research, which will have meetings Thursday afternoon, January 29, Friday morning, January 30, and Saturday morning, January 31. (Further information available from Dr. William Valentine, UCLA Medical Center, Los Angeles 24.)

Western Section of American Federation for Clinical Research, whose meetings will be held Wednesday afternoon, January 28, and Thursday morning, January 29. (Further information from Dr. Richard Havel, U.C. Medical Center, San Francisco 22.)

* * *

The California Division of the American Cancer Society has announced the amount of **money, received from public contributions, that has been allocated** in California for cancer research since 1946. The total, including 1958-59 grants, is $6,074,767. The six medical school research centers in the state received the bulk of the funds ($4,905,827). However, several smaller research centers did receive sizeable amounts ($1,168,440).

The accompanying table shows the total allocation of funds since 1946, including the 1958-59 grants:

1958-1959 National Grants	$ 609,941
1958-1959 California Division Grants	132,581
1946-1959 Cumulative National Grants	4,771,441
1946-1959 Cumulative California Division Grants	1,302,826
1946-1959 Cumulative National and California Division Grants	6,074,267

POSTGRADUATE
EDUCATION NOTICES

THIS BULLETIN of the dotes of postgroduote education programs and the meetings of various medicol orgonizations in Californio is supplied by the Committee on Postgraduate Activities of the Colifornio Medicol Association. In order thot they may be listed here, pleose send communicotions reloting to your future medicol or surgicol progroms to: Mrs. Morgoret H. Griffith, Director, Postgroduote Activities, Colifornio Medicol Associotion, 2975 Wilshire Boulevord, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Physiological and Clinical Consideration of:

Kidney. Wednesday, January 21, 1959. Six hours.‡

Nervous System. Wednesday, February 4, 1959. Six hours.‡

Preventive Psychiatry in Pediatric Practice. Mondays, January 19 through March 23, 1959. Twenty hours. Fee: $100.00.

The Kidney. Wednesday, January 21, 1959. Six hours. Fee: $20.00.

Allergies. Friday and Saturday, January 23 and 24, 1959. Seven hours. Fee: $55.00 (including dinner).

Photography in Medical Practice and Research. Tuesdays, January 27 through April 21, 1959. Twenty-four hours. Fee: $35.00.

The Nervous System. Wednesday, February 4, 1959. Six hours. Fee: $20.00.

Advanced Electrocardiography. Mondays, February 9 to March 23. Twelve hours. Fee: $50.00.

Medical Terminology: Intermediate (Section 11). Tuesdays, February 10 through June 16, 1959. Forty-five hours. Fee: $35.00.

Medical Terminology: Intermediate (Section I). Thursdays, February 12 through June 18, 1959. Forty-five hours. Fee: $35.00.

Medical Shorthand. Thursdays, February 12 through June 18, 1959. Forty-five hours. Fee: $35.00.

Principles in Veterinary Surgery. Thursday, February 12 through March 26. Sixteen hours. Fee: $70.00.

Management of Surgical Emergencies. Friday, February 13, 1959. Six hours. Fee: $45.00 (includes dinner).

Management of Medical Emergencies. Saturday, February 14, 1959. Six hours. Fee: $20.00.

Medical Terminology for Medical Center Personnel. Tuesdays and Thursdays, February 24 through May 28, 1959. Twenty-six hours. Fee: $8.00.

Research in Nursing. Tuesdays, March 3 through June 9, 1959. Thirty hours. Fee: $25.00.

Medical Mycology for Laboratory Technologists. Wednesdays, March 4 through April 22, 1959. Twenty-four hours. Fee: $50.00.

Ear, Nose and Throat. Friday and Saturday, March 13 and 14, 1959. Six hours.*

Diagnostic Radiology. Friday and Saturday, March 20 and 21, 1959. Twelve hours. Fee: $55.00 (includes lunch).

Management of Sports Injuries. Wednesday and Thursday, March 25 and 26, 1959. Six hours. Fee: $10.00.

Steroids. Friday and Saturday, April 3 and 4, 1959. Six hours. Fee: $12.50.

Current Developments in Nutrition (Arrowhead). Friday, Saturday and Sunday, April 24, 25 and 26, 1959. Ten hours. Fee: $50.00 (includes board and room).

Clinical Laboratory Techniques. Thursday, Friday and Saturday, May 21, 22 and 23. Nine hours.*

Clinical Traineeships—Anesthesia. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Advances in Public Health Nursing. Thursday Evenings, January 15 to March 5. Sixteen hours. Fee: $15.00.

Postgraduate Clinics in Dermatology. Friday and Saturday, January 16 and 17. Fourteen hours. Fee: $40.00.

Anesthesiology for Part Time Anesthetists. Thursday and Friday, January 22 and 23, 1959. Fourteen hours. Fee: $40.00.

Adolescents (Children's Hospital). Saturday, January 24. Seven hours. Fee: $12.50.

Pharmacologic Approach to the Study of the Mind. Sunday through Tuesday, January 25 through 27, 1959. Twenty-one hours. Fee: $40.00.

Course for Physicians in General Practice (Mount Zion Hospital). Monday through Thursday, February 2 through February 5. Thirty-six hours. Fee: $70.00.

Advances in Psychiatric Nursing. Thursday evenings, March 12 through April 30. Sixteen hours. Fee: $15.00.

Diagnostic Radiology. Friday through Tuesday, March 20 through March 24. Thirty-five hours. Fee: $80.00.

Immunization (Children's Hospital). Saturday, March 21, 1959. Seven hours.*

Enzymes—Basic and Clinical Aspects. Thursday, Friday and Saturday, April 2, 3 and 4, 1959. Twenty-one hours.*

Nursing in Rehabilitation. Monday to Friday, April 27 through May 15, 1959. One hundred and five hours. No fee.

Ear-Nose-Throat. Friday and Saturday, May 15 and 16, 1959. Fourteen hours. Fee: $40.00.

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Head, Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

‡Fee: $20.00 each.

*Fees to be announced.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Symposium on Adrenal Steroids, Friday and Saturday, March 27 and 28. Twelve hours.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m., USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Fluid and Electrolyte Balance. March 20 through 22, 1959. Hotel Statler, Los Angeles. In addition to introductory lectures, there will be supervised practice on cases which demonstrate electrolyte and water imbalance. Tuition: $75.00.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14, 1959. (As a time and money saver, round trip air travel is also possible July 29 to August 10, 1959.)

Contact: Phil R. Manning, M.D., Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Head and Neck (14 periods, 63 hours), April 22 through June 3, 1959. Tuition: $75.00.

Surgical Anatomy—Head and Neck (12 periods, 24 hours), April 22 through June 3, 1959. Tuition: $35.00.

1959 Alumni Postgraduate Convention. Refresher Courses, March 8 and 9 at 1720 Brooklyn Avenue; Scientific Assembly, March 10, 11 and 12 at Biltmore Hotel. *Contact:* Walter Crawford, executive secretary, 316 North Bailey Street, Los Angeles 33.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

ANNUAL SESSION POSTGRADUATE COURSES

BY STANFORD UNIVERSITY SCHOOL OF MEDICINE:

Ophthalmology. 4 hours. Saturday, February 21, 9:00 a.m. to 1:00 p.m. at Stanford University Hospital.

Neurology for Physicians. 12 hours. Saturday and Sunday, February 21 and 22, 9:00 a.m. to 12 noon and 1:00 p.m. to 4:00 p.m. at Stanford University Hospital.

Treatment of Hernia. 9 hours. Sunday, Monday and Tuesday, February 22, 23 and 24, 9:00 a.m. to 12 noon at Stanford University Hospital.

BY UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE:

Medicine in the Jet and Space Age. 7 hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 1:30 p.m. to 5:00 p.m. at University of California Medical Center.

Family Endocrinology. 9½ hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 2:00 p.m. to 5:00 p.m. Monday, February 23, 9:00 to 12 noon at University of California Medical Center.

POSTGRADUATE INSTITUTES—1959

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel California, Fresno. Chairman: Owen Steinbach, M.D., 3004 Fresno St., Fresno.

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25 and 26, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

* * *

Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued early next year. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Medical Dates Bulletin

JANUARY MEETINGS

Southern California Chapter, American College of Surgeons Annual Meeting, January 16 through January 18, Coronado Hotel, Coronado. *Contact:* Max R. Gaspar, M.D., secretary-treasurer, 211 Cherry Avenue, Long Beach 2.

Los Angeles Society of Allergy Meeting, Los Angeles County Medical Association Headquarters. January 20, 1959, 8:00 p.m. *Contact:* Isadore Pitesky, M.D., Secretary, 2401 Atlantic Avenue, Long Beach 6.

Long Beach Heart Association, Tuberculosis Association and Cancer Society, Medical Institute on Cancer and Diseases of Heart, Chest and Lungs, January 21, 1:30 p.m., Lafayette Hotel, Long Beach. *Contact:* Raymond W. Kelso, Jr., M.D., Chairman, 117 E. 8th Street, Long Beach, HE 2-7971.

Cancer Commission, California Medical Association Cancer Conference for Tulare County Medical Society. January 22, Tulare.*

Fresno County Heart Association, Seventh Annual Central California Cardiovascular Symposium, January 24, 8:00 a.m. to 5:30 p.m., Fresno Memorial Auditorium, Fresno. *Contact:* Robert W. Potter, M.D., Chairman, Scientific Committee, 329 North Van Ness, Fresno 1.

Orange County Heart Association, Annual Symposium on Heart Disease, all day January 24, Disneyland Hotel, Anaheim (Gourmet Restaurant). *Contact:* Howard G. Buswell, Executive Director, P. O. Box 1704, Santa Ana.

Western Society for Clinical Research, January 29 through January 31, Carmel. *Contact:* William N. Valentine, M.D., secretary, U.C.L.A. Medical Center, Los Angeles 24.

FEBRUARY MEETINGS

Contra Costa County Heart Association Sixth Annual Postgraduate Course for Physicians, Mondays, February 2 through April 13, 8:00-10:00 p.m., Contra Costa County Hospital, Martinez. *Contact:* Mrs. Loyse Casebolt, Executive Director, 2030 N. Main Street, Walnut Creek.

Butte-Glenn Counties Heart Association Cardiovascular Disease Symposium. February 4, 8:30 a.m. to 5:00 p.m., Elk's Club Lodge, Chico. *Contact:* Nathan C. Hanson, Executive Secretary, 310 Main Street, Chico.

Anesthesia Section, Los Angeles County Medical Association, 4th Annual Postgraduate Session. February 7 and 8, Los Angeles County Medical Building. *Contact:* Thomas W. McIntosh, M.D., 686 E. Union Street, Pasadena.

American College of Physicians, Southern California Region, Annual Meeting. February 7 and 8, El Mirador Hotel, Palm Springs. Western dinner and entertainment on Friday evening. *Contact:* George C. Griffith, M.D., 1136 W. 6th Street, Los Angeles 17.

Forum, sponsored by Los Angeles Obstetrics and Gynecology Society, for the younger specialists and residents. February 7 and 8, Ambassador Hotel, Los Angeles. *Contact:* Kenneth F. Morgan, M.D., 2010 Wilshire Blvd., Los Angeles 57.

Obstetrical and Gynecological Assembly of Southern California announces its 14th Annual series of lectures. February 9 through 13, Ambassador Hotel, Los Angeles. For information write P.O. Box 57118, Flint Station, Los Angeles 57.

Cancer Commission, California Medical Association Cancer Conference for Kings County Medical Society. February 12, Hanford.*

Alameda-Contra Costa Medical Association and the Institute for Metabolic Research Seventh Annual Symposium on Metabolic Problems. All day, February 16 through February 18, 1959. Auditorium, Highland-Alameda County Hospital, Oakland, California. *Contact:* L. W. Kinsell, M.D., director, Institute for Metabolic Research, 2701 14th Avenue, Oakland 6.

American College of Chest Physicians Fourth Annual Postgraduate Course on Diseases of the Chest, February 16 through February 20, 1959. Sir Francis Drake Hotel, San Francisco, California. *Contact:* Executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

California Medical Association Annual Meeting, February 22 through February 25, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

Cancer Commission, California Medical Association Cancer Conference for Mendocino-Lake Counties Medical Society. February 26, Ukiah.*

MARCH MEETINGS

American College of Allergists, March 15 through March 20, Fairmont Hotel, San Francisco. *Contact:* M. Coleman Harris, M.D., Secretary, 450 Sutter St., San Francisco 8.

Pioneers Memorial Hospital 9th Annual Postgraduate Medical and Surgical Convention. March 20 and 21, University of Colorado Medical School. *Contact:* George Jaquith, M.D., Secretary, Route 1, Box 70, Brawley, Calif.

American Orthopsychiatric Association 36th Annual Meeting, March 30 through April 1, Sheraton-Palace Hotel, San Francisco. *Contact:* Donald Shaskan, M.D., chairman, Arrangements Committee, Veterans Administration, 49 Fourth St., San Francisco 3.

APRIL MEETINGS

American Group Psythotherapy Association 5th Annual Western Regional Meeting. April 2 and 3, Sheraton-Palace Hotel, San Francisco. 9:00 a.m. to 5:00 p.m. each day. *Contact:* H. S. Morgenstern, M.D., Langley-Porter Clinic, University of California Medical Center, San Francisco 22.

*Contact: Walter E. Batchelder, M.D., Medical Director, C.M.A. Cancer Commission, 450 Sutter Street, San Francisco 8.

California Tuberculosis and Health Association and California Trudeau Society Annual Meeting, April 2 through 4, Villa Motor Hotel, San Mateo. *Contact:* Mrs. Mary C. French, 130 Hayes Street, San Francisco.

American Academy of General Practice. April 6 through 9, San Francisco. *Contact:* Mr. M. F. Cahal, Executive Secretary, Volker Blvd. at Brookside, Kansas City 12, Missouri.

Los Angeles County Heart Association Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., Chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

American Academy of Pediatrics Spring Meeting, April 13 to April 16, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* Charles H. Cutler, M.D., state chairman, Northern California Chapter, 2615 I Street, Sacramento.

American Academy of Neurology. April 13 through 18, Statler Hotel, Los Angeles. *Contact:* Joseph M. Foley, M.D., Boston City Hospital, Boston, Secretary.

Cancer Commission, California Medical Association Cancer Conference for Ventura County Medical Society. April 14, Oxnard.*

American Surgical Association. April 15 through 17, Fairmont Hotel, San Francisco. *Contact:* W. A. Altemeier, M.D., Secretary, Cincinnati General Hospital, Cincinnati 29.

American Society of Internal Medicine 3rd Annual Meeting. April 19, Conrad Hilton Hotel, Chicago. *Contact:* Clyde C. Greene, Jr., M.D., Assistant Secretary-Treasurer, 350 Post Street, San Francisco 8.

American College of Physicians Meeting, Conrad Hilton Hotel, Chicago, April 20-24, 1959. *Contact:* Mr. E. R. Loveland, Executive Secretary, 4200 Pine Street, Philadelphia 4.

Hawaii Medical Association Annual Meeting, April 23 through 25, Hilo. *Contact:* Miss Lee McCaslin, Executive Secretary, 510 S. Beretania Street, Honolulu 13.

*Contact: Walter E. Batchelder, M.D., Medical Director, C.M.A. Cancer Commission, 450 Sutter Street, San Francisco 8.

MAY MEETINGS

The Nevada Academy of General Practice Annual Meeting, May 21 through 23, Riverside Hotel, Reno. Program by University of Southern California School of Medicine. *Contact:* Roy M. Peters, M.D., Chairman, 475 S. Arlington Avenue, Reno, Nevada.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

SUMMER AND FALL MEETINGS

Western Branch, American Public Health Association Annual Meeting. June 1 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

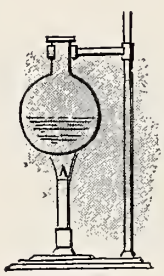
Rocky Mountain Cancer Conference, Scientific only, July 22 through 23, 9:00 a.m., Brown Palace Hotel, Denver. *Contact:* N. Paul Isbell, M.D., Chairman, 835 Republic Building, Denver 2, Colorado.

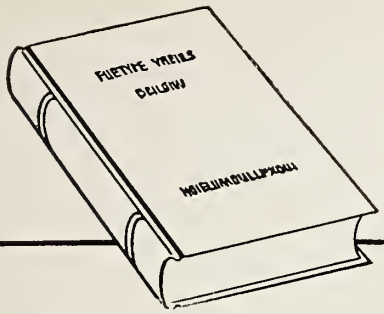
Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, Executive Secretary, 1309 Seventh Avenue, Seattle, Washington.

Western Industrial Medical Association, Inc. 18th Annual Meeting, held in conjunction with Third Western Industrial Health Conference, all day October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

California Society of Internal Medicine Annual Meeting, October 2 through 4, Miramar Hotel, Santa Barbara. *Contact:* Mrs. Mildred B. Coleman, Executive Secretary, or Clyde C. Greene, Jr., M.D., Secretary-Treasurer, 350 Post Street, San Francisco 8.





THE PHYSICIAN'S *Bookshelf*

DRUGS OF CHOICE—1958-1959—Edited by Walter Modell, M.D., Associate Professor of Pharmacology, Cornell University Medical College. C. V. Mosby Company, St. Louis, Mo., 1958. 931 pages, $12.75.

The purpose of this book as stated in the Preface is to provide "a practical guide to the selection of the best drug for a particular therapeutic problem." With this in view, an expert in each particular field of therapeutics has been chosen as author of each chapter. Certain of the authors have accomplished this purpose in splendid manner, others have dealt in generalities and thus ignored the book's stated purpose, while still others have written as for a textbook of pharmacology. In this reviewer's opinion, the chapters most nearly accomplishing the purpose are "Choice of an Anticonvulsant" by Tracy Jackson Putnam, "Choice of an Antiemetic Agent," "Choice of Vasoconstrictor Drugs for Hypotension and Shock" and "Choice of Vasodilator Drugs for the Treatment of Peripheral Vascular Disturbances" by John H. Moyer, "Choice of an Agent for Disturbances in Equilibrium" by Paul K. Smith, "Choice of Drugs in the Treatment of Hypertension" by Sibley W. Hoobler, and "Choice of Drugs for Cancer and Allied Diseases" by David A. Karnofsky. That portion of the chapter on "The Choice of an Anesthetic" related to local anesthetics, by Joseph F. Artusio, Jr. should also be mentioned in this regard.

Failing in the purpose to guide the physician in "selection of the best drug for a particular therapeutic problem" but providing excellent discussions of physiological, pathological and pharmacological principles on which treatment is to be based are the chapters on "The Choice of Agents to Adjust and Maintain Internal Homeostasis" by Paul L. McLain and Frederick R. Franke, "Choice of a Diuretic" and "Choice of Drugs for Diseases of the Heart" by Walter Modell, "The Choice of Drugs for Stimulation of Mental and Physical Activity" by Robert G. Heath and Donald D. Lathrop, "The Choice of a Stimulant to Vital Medullary Centers" by McKeen Cattell, "The Choice of Drugs for the Relief of Pain" by John J. Bonica, "The Choice of Sedatives and Tranquillizers" by Paul H. Hoch and "The Choice of a Hypnotic" by Louis Lasagna. It is unfortunate that so outstanding an authority on "The Choice of an Anti-Infective Agent" as Chester S. Keefer should also have dealt so much in generalities and pharmacological descriptions rather than drawing upon his vast experience for specific illustrations. The doctor who needs the type of information which the book was intended to give does not wish to read or pay for pages devoted to the nature of disease, physiological processes and physical or surgical treatment (see page 224) in this book, when he has this information already available in other books on his shelf.

"The Choice of Drugs for Nutritional Disorders" by William B. Dean has been filled with a great deal of important information on vitamins but entirely overlooks the fact that amino acids, carbohydrates, fats and minerals are still poorly understood as nutritional factors by many practitioners. Paragraph 3 on page 102 should be read periodically by every one concerned with nutrition.

The editor Walter Modell, has written an excellent chapter on "Principles of the Choice of Drugs," well worth the time of pharmacologists as well as practitioners, with portions that should be quoted to patients, for example, "The newspapers, too, especially the Sunday supplements, have a special passion for disclosing undigested information on drugs which have a suggestive design of pharmacological action and for presenting them forthwith as having unquestioned clinical utility." For those who think that the laboratory studies are useless or give misleading information it would be enlightening to read page 22.

Alan K. Done, in "The Choice of Drugs for Children" has done little to help the physician select "the best drug for a particular therapeutic problem" but has given excellent directions for dosage for children and points out "that children are not simply miniature adults with respect to reaction to disease or response to drugs."

At the end of each chapter, with the exception of the first two, is a Drug Index, which lists most drugs related to the chapter by trade name, manufacturer and non-proprietary name. Dosage forms and methods of administration are also included. Since now nearly every physician receives an annual copy of "PDR" which includes this information and more, the "Drug Index" could well be omitted and thus reduce the cost, without reducing the value of this book.

CLINTON H. THIENES, M.D.

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DIABETES AS A WAY OF LIFE—T. S. Danowsky, M.D., Renziehausen Professor of Research Medicine, University of Pittsburgh School of Medicine; Senior Staff Physician at Presbyterian-Woman's, Children's, Elizabeth Steel Magee, and Shadyside Hospitals of Pittsburgh; Consultant in Metabolism, Oakland Veteran's Administration Hospital, Pittsburgh. Coward-McCann, Inc., New York. 177 pages, $3.50.

This little book offers a frank and factual presentation of the subject to the diabetic patient. The often neglected social aspects of the disease are discussed. An outline for the hostess of the diabetic guest is offered and a copy of these few pages might be welcomed. There is relatively little on actual insulin adjustment, although the use of Protamine Zinc Insulin/Regular Insulin mixtures is discussed. The strictness of control is left to the physician. One wonders about an average 150-pound male requiring 2700 calories a day. Diet by the food exchange method is apparently preferred, but there is little on menu planning. Physical inactivity "making diabetes worse" might be confusing at first glance, although the effect is spelled out later. There is a question and answer section at the end. In general, this is a very good book and highly recommended for the diabetic patient of average or better intelligence.

FORENSIC MEDICINE—Keith Simpson, M.D. (Lond.), Reader in Forensic Medicine to the University of London at Guy's Hospital, London; Edward Arnold (Publishers) Ltd., London—distributed by The Williams & Wilkins Co., Baltimore, exclusive U. S. agents, 1958. 352 pages, $7.00.

A page by page comparison of the 1952 edition with the 1958 edition shows little change of significance. Certainly not such as to warrant any urgency in obtaining the new edition to replace the old.

A number of new photographs appear illustrating points in the text, although not really significant in the overall.

A few new comments appear in the subjects of ballistics and anesthetic deaths as well as including the recent (1956) revisions of the British law on Coroner's rules, fees, homicide acts and sexual offenses.

The author of the book acknowledges in the preface that this is a "short textbook to provide a brief and essentially practical guide . . ." The book is intended for the doctor in practice as well as for the lawyer.

Many books provide much more detailed reviews of the field, but in line with its purpose this book is concise, clearly written and well organized. It is an excellent and quite reliable reference source. This reviewer has owned the previous edition and has many times referred to the volume as a ready source of key information in the field of legal medicine. To one who may have occasion to seek medico-legal information and who does not now have available a copy, the book is readily recommended.

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OPHTHALMIC PLASTIC SURGERY—Second Revised Edition—Sidney A. Fox, M.S. (Ophth.), M.D., F.A.C.S., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Chief, Eye Service, Bronx Veterans Administration Hospital, Goldwater Memorial Hospital, and Hospital for Joint Diseases. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N. Y., 1958. 324 pages, $15.00.

The second edition is best resumeed by the author's statement that he is including the procedures he has found satisfactory. He is trying to avoid a compend of known procedures.

The book is a text of 318 pages.

It begins with surface and surgical anatomy. It has 149 quite good black and white illustrations.

He outlines and summarizes the optimum procedure for a given defect.

In California a high incidence of malpractice suits concern the results of plastic surgery.

It would behoove any surgeon planning a plastic surgical procedure to be well informed of possible complication in lid surgery.

This book provides good practical procedures in plastic surgery but the mere reading of such a book does not make the reader a competent plastic surgeon.

Alfred R. Robbins, M.D.

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LIVING WITH YOUR ALLERGY—Samuel M. Feinberg, M.D., Professor of Medicine and Director of Allergy Research Laboratory, Northwestern University Medical School. J. B. Lippincott Company, East Washington Square, Philadelphia, 1958. 190 pages, $1.25.

In 1941, the late Dr. Warren T. Vaughan, a pioneer student of allergic phenomena, published a small volume for lay readers entitled "Strange Malady, The Story of Allergy," in which he presented in non-technical language, the underlying causes and treatment of the more common allergic ailments. Since then, the term allergy has become a household word largely because of the frequent use of the term in lay periodicals and newspaper columns. Although many problems underlying allergic diseases still await solution, notable additions have been made to our knowledge of allergy since Dr. Vaughan's book was published.

In his easily readable text, "Living With Your Allergy," Dr. Samuel M. Feinberg, an outstanding authority in this field, brings the subject of allergic diseases for the lay reader up-to-date. The term allergy has been used rather loosely at times for conditions which are not due to allergic causes. He defines what is and what is not allergy, discusses the common allergic diseases and their management. Dr. Feinberg covers such well understood clinical allergies as asthma, hay fever, skin, digestive, drug and other less frequent allergic ailments. His descriptions of the causes of allergic symptoms should do much to clarify the subject and correct certain misconceptions regarding allergic conditions which are now so prevalent. The text presents a fair and unbiased appraisal of what can and what should not be expected from present-day methods of treatment.

For hay fever patients who suffer from ragweed sensitivity, Dr. Feinberg's geographical list of ragweed-free localities in various states will help the patient choose an area where he may be symptom-free.

Samuel H. Hurwitz, M.D.

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BRAIN TUMORS—Their Biology and Pathology—American Edition (based on Second German Edition)—K. J. Zülch, M.D., Professor of Neurology, University of Cologne; translated by Alan B. Rothballer, M.D., M.Sc., Assistant Professor of Anatomy and Surgery, Albert Einstein College of Medicine; and Jerry Olszewski, M.D., Ph.D., Associate Professor of Pathology, College of Medicine, University of Saskatchewan. Springer Publishing Company, Inc., New York, 1957. 308 pages, $9.50.

This is an excellent translation of Professor Zülch's monumental study of cerebral neoplasms. It starts off with a consideration of the classification of brain tumors as it has evolved, then deals with the gross and microscopic appearance of tumors, their sites of election, incidence and natural history. The treatment of the subject is much too detailed for the general practitioner of medicine, but will be of value to the neurologist and neurosurgeon.

Henry Newman, M.D.

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THE MEDICAL MANAGEMENT OF CANCER—Henry D. Diamond, M.D., F.A.C.P., Associate Attending Physician, The Medical Neoplasia Service of the Department of Medicine, The Memorial Center for Cancer and Allied Diseases; Associate and Section Head of the Lymphoma Section of the Division of Clinical Chemotherapy, The Sloan-Kettering Institute for Cancer Research; Assistant Professor of Clinical Medicine, Cornell University Medical College. Modern Medical Monographs No. 16, Grune & Stratton, New York, 1958. 179 pages, $6.75.

The many advances in the last decade in the field of nonsurgical treatment of cancer warrant the appearance of this monograph, which weighs heavily on the extensive experience of the Memorial Hospital in New York. Over half the book is devoted to conditions in which the primary treatment is medical, i.e., the lymphomas, leukemias and multiple myeloma. The remainder concerns itself with conditions where surgical treatment is primary—neuroblastoma, cancer of the lung, thyroid, ovary, breast and prostate. Included are general considerations of the disorder and surgical treatment, but emphasis is placed on the use of ionizing radiation and particularly chemotherapy. There is a summary of therapy at the end of each section. There is an appendix on intracavitary use of radioisotopes. There is an extensive bibliography to 1956. The illustrations are numerous and good. While primarily for the internist, this book will be of interest to all who deal with cancer patients.

William Luttgens

THE BRAIN AND HUMAN BEHAVIOR—Proceedings of the Association for Research in Nervous and Mental Disease—December 7 and 8, 1956, New York, N. Y., Volume XXXVI—Harry C. Solomon, M.D., Stanley Cobb, M.D. Wilder Penfield, M.D., editors. Williams & Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2, Md. 564 pages, with 200 illustrations and 53 tables, $15.00.

The subject for the 1956 meeting of the Association for Research in Nervous and Mental Disease was well chosen for the time, when accelerated progress in knowledge of human behavior based on advances in knowledge of neurophysiology and the study of a variety of new drugs influencing human complex mental processes required some sort of critical review. All of the material in this volume may be found in the scientific literature; however, if only to gather it together under one cover a real service has been performed. This is the least of the book's value, though; much the greatest contribution is the free discussion at the end of each presentation by individuals familiar with the field. Thus a good appreciation may be gained of the opinions of a number of workers, rather than just that of the essayist. The individual presentations vary greatly in their complexity; some are readily understood by the average physician, while others may be obscure even to the specialist. In general, where definite knowledge is available the subject matter is more readily assimilable than where there is still some groping in the dark, and unfortunately the latter situation prevails in many parts of the field of human behavior. It may be said, however, that there is little either known or conjectured about the brain and human behavior that cannot be found in this book.

HENRY NEWMAN, M.D.

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A DOCTOR'S MARITAL GUIDE FOR PATIENTS—Bernard R. Greenblat, B.S., M.D., Associate Attending Physician, Obstetrics and Gynecology, Kings County Hospital, Brooklyn; Clinical Instructor, University of the State of New York, School of Medicine, Brooklyn. The Budlong Press, 5428 N. Virginia Avenue, Chicago 25. 88 pages, patient price, $1.50. (Also available in a Catholic Edition, 88 pages, patient price, $1.50.)

This book is planned as an aid to the physician in advising young people how valuable to health a sound sexual relation can be. The basic idea is that normal men and women would get along better if they knew the facts of sexual life.

Written in semi-technical language, it contains a good deal of useful information on the physical and psychological aspects of sex and conception. It accentuates the normal qualities of and in sexual relations, distinguishes between fact and fiction, both physical and psychological. Physicians may recommend it to their patients as a sound factual working guide.

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ADVANCES IN INTERNAL MEDICINE—Volume IX—1958—Editors: William Dock, M.D., State University of New York College of Medicine at New York City; and I. Snapper, M.D., Beth-El Hospital, Brooklyn; The Year Book Publishers, Inc., 200 East Illinois St., Chicago 11, Illinois, 1958. 311 pages, $8.50.

The latest of this well known series includes the following sections: (1) The Metabolism of Vitamin B_{12} in Pernicious and Other Megaloblastic Anemias; (2) Corticosteroids and Infections; (3) Primary and Secondary Hyperparathyroidism; (4) Hereditary Defects in Clotting Mechanisms; (5) Etiology and Pathogenesis of Glomerulonephritis; (6) Pathophysiology of Carcinoid Tumors; (7) Some Aspects of Disordered Renal Tubular Function. The thoroughness with which each of the subjects, although limited in number, is handled is one of the features which makes this review volume one of the best.

BACTERIAL AND MYCOTIC INFECTIONS OF MAN—Edited by Rene J. Dubos, Ph.D., The Rockefeller Institute. Third Edition. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1958. 820 pages, with 116 illustrations, $8.50.

The new (third) edition of this well known book preserves much the same format as the previous ones. However, as Dr. Dubos tells in the preface, "the text has been almost completely rewritten." This is certainly true and the type size has been reduced so that the new edition contains about 100 pages less than the previous. The chapters on general matters and the principles of infection are especially well done and bring out up-to-date ideas. The chapters on special bacteria are comprehensive, authoritative and documented with elaborate bibliographies.

The one comment of this reviewer who is a clinician is the brevity of the clinical discussions. Lobar pneumonia, for example, is dealt with in a small paragraph, and in plague one searches in vain for a systematic discussion of the disease although the bacteriology and immunology are thoroughly treated. Nonetheless we believe the book to be a "must" for the thoughtful physician as well as for the bacteriologist.

ARTHUR L. BLOOMFIELD, M.D.

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TEXTBOOK OF PSYCHOLOGY—Donald Olding Hebb, Professor and Chairman, Department of Psychology, McGill University. W. B. Saunders Company, Philadelphia, 1958. 276 pages, 78 figures, $4.50.

This is not by any means the orthodox textbook of psychology, as indeed Professor Hebb is not the orthodox psychologist. Although the doctrines of the behavioristic school are largely followed, this is not exclusively the case. Wherever possible behavior is tied in with known facts of function and structure of the nervous system, and the neurologist finds this elementary text most interesting and useful. The book can be recommended to the physician who would like to have an understanding of the complex functioning of the nervous system as related to normal human behavior based on current concepts of neuroanatomy and neurophysiology. The newer drugs influencing mental behavior also receive full consideration.

HENRY NEWMAN, M.D.

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ETIOLOGY AND TREATMENT OF LEUKEMIA—Proceedings of the First Louisiana Cancer Conference—Walter J. Burdette, Ph.D., M.D., F.A.C.S., Professor and Head of the Department of Surgery and Director of the Laboratory of Clinical Biology, University of Utah College of Medicine; Surgeon-in-Chief, Salt Lake County Hospital; Chief Surgical Consultant, Veterans Administration Hospitals; Salt Lake City, Utah. C. V. Mosby Company, St. Louis, Mo., 1958. 167 pages, $4.00.

The book covers the etiology and treatment of leukemia in a conservative and logical manner. The part dealing with viruses and other leukomogenic agents is very interesting and in particular affords a good opportunity of obtaining a bird's eye view of viruses as causative agents in leukemia. Little that is new in the field is mentioned but most of the known facts are brought together in a clear and succinct way. The informal discussion by various members of the panel contains some worth while information and makes this formal presentation more helpful.

Treatment is discussed under various aspects and the different therapeutic agents are conservatively presented. There is nothing in this section with which one interested in hematology would not be familiar but those less familiar with the subject will find this a good and convenient source for information.

DIETARY PREVENTION AND TREATMENT OF HEART DISEASE—John W. Gofman, Ph.D., M.D., Donner Laboratory, University of California, Berkeley; Alex V. Nichols, Ph.D., Donner Laboratory, University of California, Berkeley; E. Virginia Dobbin, Senior Dietitian, E. V. Cowell Memorial Hospital, University of California, Berkeley. G. P. Putnam's Sons, 210 Madison Ave., New York 16, N. Y., 1958. 256 pages, $3.95.

Dr. Gofman's work, especially on the amount and significance of the blood lipoproteins, is well known. In the opening chapters he sustains the thesis of the bad effect on the coronary arteries of increased quantities of certain lipoprotein fractions. These changes he thinks can be prevented or delayed by dietary regulation. At this point the dietitian (Dobbin) takes over the major burden of the discussion to which nearly two-thirds of the book are given over. Planning the diet and the preparation of foods are gone into in detail.

ARTHUR L. BLOOMFIELD, M.D.

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COMMUNICABLE DISEASES—A Bibliography of Internal Medicine—Arthur L. Bloomfield, M.D. The University of Chicago Press, Chicago, Illinois, 1958. 560 pages, $10.00.

This is a book of first importance. Technically it is an annotated and critical bibliography on the communicable diseases, but in content and conception it is a major contribution to the education of the physician both young and old. In recognizing the problem created for student and practitioner by the enormous growth of the medical literature so that the student, in a vain attempt to keep up, ignores everything except the writings of the past decade, the author fears that "there is real danger that we shall become completely cut off from our medical past and relapse into a sort of modern Dark Age." And further, he points out that for the critical understanding of a subject, it is imperative for the physician to be able to follow the development of ideas, which requires some sort of historical approach. These needs are very real not only for medicine but also for science in general. Indeed, it is shocking that this highly experienced teacher could write, "Few students nowadays (1957) remember Sir Thomas Lewis, George Minot, or F. G. Banting; most of them have never heard of Von Mering and Minkowski.

A solution to this problem was provided for general science by James Conant of Harvard in the brilliant series under his editorship of "Case Histories in Experimental Science," where an historical approach is provided to teach the tactics and strategy of science as well as the facts and principles to which the typical textbook is restricted. Here an acknowledged master internist, who is Emeritus Professor of Medicine at Stanford University, guides us through the morass of literature by discussing every contribution on the communicable diseases of fundamental importance, but excluding those which add nothing essentially new. In this the author has been extraordinarily successful, and his annotations are most readable and informative. It is most exciting to have such a guide. However, even Homer nods, as the adage goes, for the author in his criticism of John Hunter (pages 298-299) fails to appreciate his errors were not the outcome of "fanciful theory" but due to the confusion caused by his famous self-experiment in which he accidentally contaminated himself with both gonorrhoea and syphilis in the belief that he was innoculating a single disease. John Hunter was not given to theory. His famous dictum written to Jenner was "Why think? Why not try the experiment?"

The present work covers the literature on some thirty diseases, opening up with typhoid as a gracious tribute to another great clinician Sir William Osler who discussed this disease first. The author has translated the relevant sections written in foreign languages and appended abstracts in the case of articles published in obscure or inaccessible journals. Apparently this is to be the first volume of a series to cover the entire field of internal medicine. What an immense and Herculean labor the author has set himself! Every student of medicine and physician will be eternally in Dr. Bloomfield's debt and will want to have this volume on his shelf not only for reference but to read.

J. B. DEC. M. SAUNDERS, M.D.

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ANNUAL REVIEW OF MEDICINE—Volume 9—1958—David A. Rytand, Editor, and William Creger, Associate Editor, both from Stanford University School of Medicine. Annual Reviews, Inc., Palo Alto, 1958. 530 pages, $7.00, postpaid.

We continue to be impressed by the high quality of the Annual Review of Medicine. For the most part the authors manage to keep their reviews coherent and interesting without including every article on a subject whether significant or not.

In the 1958 volume are twenty-eight chapters ranging over a variety of fields of interest, from organ systems to laboratory aids, and ending with a note on recent advances and future plans in Soviet medical research.

Physicians interested in teaching and research will find this book particularly useful.

EDGAR WAYBURN, M.D.

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THE PRACTICE OF NUCLEAR MEDICINE—William H. Blahd, M.D., Chief Radioisotope Service, Veterans Administration Center, Los Angeles, California; Franz K. Bauer, M.D., Chief, Outpatient Services, Los Angeles County Hospital; Associate Clinical Professor of Medicine and Coordinator of Radioisotope Research, University of Southern California School of Medicine, and Benedict Cassen, Ph.D., Chief, Medical Physics Section, Atomic Energy Project and Clinical Professor of Biophysics, University of California at Los Angeles, School of Medicine. Introduction by Paul Aebersold, Ph.D., Assistant Director for Isotopes and Radiation, Division of Civilian Application, United States Atomic Energy Commission. Foreword by Joseph F. Ross, M.D., Associate Dean, Professor of Medicine and Radiology, School of Medicine, University of California at Los Angeles. Charles C. Thomas, Springfield, Illinois, 1958. 407 pages, $12.50.

This book has been written with the intention of bringing the basic principles and the practical and clinical aspects of nuclear medicine to the practicing physician.

The book is divided into four parts: Part I, Physical Principles; Part II, Diagnostic Methods; Part III, Therapeutic Applications; and Part IV, Laboratory and Instruments.

The authors describe the various applications of the use of nuclear energy to the diagnosis and treatment of diseases of the heart, blood and blood vessels, of the gastro-intestinal tract, liver, kidneys, and of the lymphatic system. The authors have had a great deal of clinical experience and also in nuclear medicine instrumentation.

Great advances have been made in nuclear medicine in recent years, and it is important that all practicing physicians know the help which they may expect from the use of ionizing radiation. This book will provide this information. It is clearly and authoritatively written and will be of considerable interest to the specialist as well as the general practitioner. It will serve as a ready reference source which will be invaluable to the reader. The data is presented from a practical clinical viewpoint rather than stressing the highly technical aspects.

House of Delegates Agenda

1959 Annual Session

Concert Room, Sheraton-Palace Hotel

Speaker.....James C. Doyle, Beverly Hills
Vice-Speaker.....Ivan C. Heron, San Francisco
Secretary.....Albert C. Daniels, San Francisco

FIRST MEETING

Sunday, February 22, at 9:30 a.m.

ORDER OF BUSINESS

1. Call to order.
2. Report of Committee on Credentials, and Organization of the House of Delegates.
3. Roll call.
4. Announcement and approval of Reference Committees.
 (a) Committee on Credentials. (Delegates must register with the Committee.)
 (b) Reference Committee on the Reports of Officers, the Council, the Commissions, and Standing and Special Committees. (Reference Committee No. 1.)
 (c) Reference Committee on Finance, to review the reports of the Secretary and the Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year. (Reference Committee No. 2.)
 (d) Reference Committee on Resolutions and New and Miscellaneous Business. (Reference Committee No. 3.)
 (e) Reference Committee (No. 3A) on Resolutions and New and Miscellaneous Business.
 (f) Reference Committee on Amendments to the Constitution and By-Laws. (Reference Committee No. 4.)
 (g) Reference Committee on C.P.S. Business.
5. Address by President of the Woman's Auxiliary to the C.M.A.—Mrs. Newell Jones, Encino.
6. Address by President Francis E. West—Presentation of 50-Year Awards.
7. Miscellaneous announcements by the Speaker. (Stenographic service to secure copies of resolutions, etc.)
8. Report of the President—Francis E. West.
9. Report of the President-elect—T. Eric Reynolds.
10. Report of the Speaker of the House of Delegates—James C. Doyle.
11. Report of the Vice-Speaker of the House of Delegates—Ivan C. Heron.
12. Report of the Trustees of the California Medical Association—Francis E. West, President.
13. Report of Physicians' Benevolence Fund, Inc.—Francis E. West, President.
14. Report of the Secretary—Albert C. Daniels.
15. Report of the Editor—Dwight L. Wilbur.
16. Report of the Executive Secretary—John Hunton.
17. Report of Legal Counsel—Peart, Baraty and Hassard.
18. Report of the Advisory Committee for Emergency Action.
19. Report of the Council—Donald D. Lum, Chairman.
20. Reports of District Councilors.
21. Report of C.P.S. Board of Trustees—A. A. Morrison, President.
22. Reports of Commissions.
 (a) Cancer Commission—David A. Wood.
 (b) Commission on Medical Education—Albert C. Daniels.
 (1) Committee on Maternal and Child Care—James W. Ravenscroft.
 (2) Committee on Medical Education and Hospitals—Walter E. MacPherson.
 (3) Committee on Postgraduate Activities—Edward C. Rosenow, Jr.
 (c) Commission on Medical Services—Francis J. Cox.
 (1) Committee on Fees—H. Dean Hoskins.
 (2) Committee on Government Financed Medical Care—John M. Rumsey.
 (a) Liaison Committee to State Department of Social Welfare—Donald C. Harrington.
 (3) Committee on Indigent and Aged—Thomas N. Elmendorf.
 (4) Committee on Medical Economics—Robert Shelton.
 (5) Committee on Rehabilitation—Francis M. McKeever.
 (d) Commission on Professional Welfare—Arthur A. Kirchner.
 (1) Committee on Health and Accident Insurance—Homer C. Pheasant.
 (2) Medical Review and Advisory Board—Arthur A. Kirchner.
 (e) Commission on Public Health and Public Agencies.
 (1) Division for Public Agencies—Warren L. Bostick.
 (*a*) Committee on Mental Health—Stuart Knox.

(*b*) Committee on Other Professions—Wayne Pollock.

(*c*) Committee on State Medical Services—Warren L. Bostick.

(*d*) Committee on Veterans Affairs—Charles B. Hudson.

(2) Division for Community Health Services—James C. MacLaggan.

(*a*) Committee on Allied Health Agencies—James C. MacLaggan.

(*b*) Committee on Blood Banks—Andrew M. Henderson, Jr.

(*c*) Committee on Civil Defense and Disaster—Justin J. Stein.

(*d*) Committee on Industrial Health—Jerome W. Shilling.

(*e*) Committee on Rural Health and Community Health—Robb Smith.

(*f*) Committee on School Health—Charles L. Branthaver.

(f) Commission on Public Policy—Dan O. Kilroy.

(1) Committee on Legislation—Dan O. Kilroy.

(2) Committee on Public Relations—Malcolm S. Watts.

(g) Judicial Commission—Donald A. Charnock.

23. Reports of Standing Committees.
 (a) Committee on Finance—Ivan C. Heron.
 (b) Committee on Scientific Work—Albert C. Daniels.
 (c) Medical Executives Conference—John Hunton.

24. Reports of Special Committees.
 (a) Committee on History and Obituaries—J. Marion Read.
 (b) Constitution Study Committee—Sam J. McClendon.
 (c) Delegates to the A.M.A.—Donald Cass.
 (d) Committee on Adoptions—G. K. Herzog, Jr.
 (e) Committee on the Private Practice of Medicine by Medical School Faculty Members—Herbert C. Moffitt.

25. Old and unfinished business.
 (a) Constitutional amendment No. 1.
 (b) Constitutional amendment No. 2.
 (c) Constitutional amendment No. 3.
 (d) Constitutional amendment No. 4.
 (e) Constitutional amendment No. 5.
 (f) By-Law amendment No. 1.

26. New Business.

SECOND MEETING

Wednesday, February 25, at 9:30 a.m.

ORDER OF BUSINESS

1. Call to order.
2. Supplemental report of Credentials Committee.
3. Roll call.
4. Secretary's announcement of Council's selection of time and place for the 1959 annual session.
5. Election of officers:
 (a) President-elect.
 (b) Speaker.
 (c) Vice-speaker.
 (d) Councilors (three-year terms):
 (1) Second District—Omer W. Wheeler, Riverside (term expiring).
 Second District—Imperial, Inyo, Mono, Orange, Riverside, and San Bernardino counties.
 (2) Third District—Office No. 1—Malcolm C. Todd, Long Beach (term expiring).
 (3) Third District—Office No. 4—Arthur A. Kirchner, Los Angeles (term expiring).
 Third District—Los Angeles county.
 (4) Fourth District—Robert O. Pearman, San Luis Obispo (term expiring).
 Fourth District—San Luis Obispo, Santa Barbara and Ventura counties.
 (5) Seventh District—Samuel R. Sherman, San Francisco (term expiring).
 Seventh District—San Francisco county.
 (6) Tenth District—Ralph C. Teall, Sacramento (term expiring).
 Tenth District—Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo, and Yuba counties.
 (e) Delegates to the American Medical Association:

 Delegates and Alternates to the American Medical Association are elected for terms of two calendar years. The Delegates and Alternates to be elected at this meeting will serve for two calendar years starting January 1, 1960.

 Incumbents:

 (1) Henry Gibbons, III, San Francisco (term expiring).
 (2) Sam J. McClendon, San Diego (term expiring).
 (3) Eugene F. Hoffman, Los Angeles (term expiring).
 (4) John W. Green, Vallejo (term expiring).
 (5) L. A. Alesen, Los Angeles (term expiring).
 (6) Frank A. MacDonald, Sacramento (term expiring).
 (7) Paul D. Foster, Los Angeles (term expiring).
 (8) Donald A. Charnock, Los Angeles (term expiring).
 (f) Alternates to the American Medical Association:
 (1) Claude P. Callaway, San Francisco (alternate to Henry Gibbons III).
 (2) John M. Rumsey, San Diego (alternate to Sam J. McClendon).
 (3) Gerald W. Shaw, Santa Monica (alternate to Eugene F. Hoffman).
 (4) Warren L. Bostick, Mill Valley (alternate to John W. Green).
 (5) J. B. Price, Santa Ana (alternate to L. A. Alesen).
 (6) J. E. Vaughan, Bakersfield (alternate to Frank A. MacDonald).
 (7) Arthur A. Kirchner, Los Angeles(alternate to Paul D. Foster).
 (8) Carl M. Hadley, San Bernardino (alternate to Donald A. Charnock).

6. Election of C.P.S. Trustees (three-year terms):
 Report of C.M.A. Council as Nominating Committee.
 Incumbents:
 (a) Bert Halter, San Francisco.
 (b) Paul I. Hoagland, Pasadena.
 (c) Mr. Guy W. Wadsworth, Jr., Los Angeles.
 (d) Leon O. Desimone, Los Angeles (ineligible for re-election).
 (e) Merlin L. Newkirk, Downey (ineligible for re-election).
7. Announcement by Secretary.
 Council's nominations of members of Commissions and Committees (for approval by the House of Delegates).
8. Reports of Reference Committees:
 (a) Reports of Reference Committee No. 1 on Reports of Officers, the Council, Commission and Standing and Special Committees.
 (b) Report of Reference Committee No. 2 on Reports of the Secretary, the Executive Secretary, and the budget and dues.
 (c) Report of Reference Committee No. 3 on Resolutions and New and Miscellaneous Business.
 (d) Report of Reference Committee No. 3A on Resolutions and New and Miscellaneous Business.
 (e) Report of Reference Committee No. 4 on Amendments to the Constitution and By-Laws.
 (f) Report of Reference Committee on C.P.S. Business.
9. Unfinished Business.
10. New Business.
11. Presentation of Officers:
 President.
 President-elect.
 Speaker.
 Vice-speaker
12. Presentation of certificate to retiring president—Francis E. West.
13. Approval of minutes. (Committee to edit.)
14. Adjournment.

JAMES C. DOYLE, *Speaker*
ALBERT C. DANIELS, *Secretary*

BY-LAW AMENDMENT OFFERED

One By-Law amendment was offered at the April session of the House of Delegates by Reference Committee No. 4, the committee to consider proposed amendments to the Constitution and By-Laws. Since all proposed amendments to the By-Laws are required to lie on the table for 24 hours before being acted upon, this amendment must await the next regular session of the House of Delegates before it can be voted upon. The proposed amendment to the By-Laws reads as follows:

AMENDMENT TO BY-LAWS

By-Law Amendment No. 1.
Author: J. B. Price.
Representing: Reference Committee No. 4.

Resolved, That Chapter VII, Section 1, of the By-Laws be amended as follows:

First, delete subsection (b) and insert

"(b) *Commission on Public Health,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Rural and Community Health,
2. Committee on School Health,
3. Committee on Mental Health,
4. Committee on Industrial Health.

"(c) *Commission on Public Agencies,* responsible for the activities of and through which the following standing committees shall report:

1. Committee on Military Affairs and Civil Defense,
2. Committee on State Medical Services,
3. Committee on Veterans Affairs,
4. Committee on Other Professions,
5. Committee on Blood Banks,
6. Committee on Allied Health Agencies.

Secondly, re-letter the following subsections from (c) to (d) through (1).

Except as herein amended, said Chapter VII. Section 1, shall remain unchanged.

PROPOSED CONSTITUTIONAL AMENDMENTS

Five proposed amendments to the Constitution of the California Medical Association were presented at the 1958 House of Delegates. Under the terms of the Constitution, these proposed amendments must lie on the table for one year, or until the next regular session of the House of Delegates. Meanwhile, they must be published at least twice, in separate issues of the official journal.

All members of the Association, and especially the members of the House of Delegates, will thus have the opportunity to review these proposals during the coming year. They will be presented to the 1959 House of Delegates for vote, on which a two-thirds affirmative vote of those Delegates present and voting is required for passage.

SECRETARY-(TREASURER)

Constitutional Amendment No. 1.
Author: Donald D. Lum.
Representing: The Council.

Resolved, That Article VI, Section 1, of the Constitution be amended by deleting the term "-Treasurer" from the present term "Secretary-Treasurer" so that the named officer shall be known as "Secretary."

REPRESENTATION IN HOUSE OF DELEGATES

Constitutional Amendment No. 2.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part A, Section 2, of the Constitution of the California Medical Association be amended by deleting the words shown in parentheses below, so that the section shall read as follows:

Section 2—Representation

As the By-Laws shall provide, each component society shall be entitled to proportionate representation in the House of Delegates (but with a minimum of two delegates).

REPRESENTATION ON THE COUNCIL

Constitutional Amendment No. 3.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved, That Article III, Part B, Section 9, of the Constitution be amended in subparagraph (a) by deleting the words shown in parentheses below and adding the words shown below in italics, so that subparagraph (a) shall read as follows:

(a) Each Councilor District, as specified in this Constitution, shall be entitled to one Councilor for each 1,000 *active* members, *or major fraction thereof,* according to its membership as of the first day of (November) *September* of the preceding year; provided that each Councilor District shall be entitled to a minimum of one Councilor.

DELEGATES FROM SECTIONS

Constitutional Amendment No. 4.
Author: A. B. Sirbu.
Representing: San Francisco Medical Society.

WHEREAS, The scientific sections constitute an important part of the structure of the C.M.A.; and

WHEREAS, The sections are not represented in the legislative body of the C.M.A., the House of Delegates; and

WHEREAS, The sections of the A.M.A. have for many years been represented in its House of Delegates; and

WHEREAS, Each section of the C.M.A. has much to contribute toward policy making, both in the scientific and the economic phases of medicine; now, therefore, be it

Resolved, That each section of the C.M.A. be entitled to send one delegate with full voting rights to the House of Delegates of the C.M.A.; and be it further

Resolved, That the C.M.A. Constitution be amended to allow for such representation as follows: Article III, Section 1 amended by the addition of (e) Delegates elected by each scientific section as listed in Chapter IV, Section 1-a of the By-Laws.

CONSIDERATION OF CONSTITUTIONAL AMENDMENTS

Constitutional Amendment No. 5
Author: W. S. Lawrence.
Representing: Butte-Glenn Medical Society.

WHEREAS, Any amendment to the Constitution should be for the greatest good of the Association; and

WHEREAS, The most recent amendment to the Constitution which eliminates the Councilors-at-Large was passed without prior hearings in the appropriate reference committee during any regular session of the Association; and

WHEREAS, This action has denied interested delegates the opportunity to meet, exchange views, discuss the ramifications and evaluate the appropriateness of the Amendment to meet its purpose; and

WHEREAS, The proponents of the amendment would be the last to feel the necessity to press such an action through the House of Delegates without adequate consideration; now, therefore, without prejudice to the previous amendment, be it

Resolved: That Article VIII, Section 3, Paragraph 2 of the Constitution be amended by addition of the following:

"Further, such proposed amendment or amendments shall be referred to the appropriate Reference Committee who shall hold hearings on the proposed amendment or amendments during the course of its regular business while the Association is in convention. If the proposal or proposals are introduced during the first session of the House, hearings shall be held at both the current and the next regular meeting. If the proposal or proposals are introduced during the second session, hearings shall be held at the next meeting, and in either event, prior to submission to the House of Delegates for vote.

Technical Exhibits

Technical exhibits at the 1959 Annual Session will establish a new record high in both numbers and variety.

All exhibits will be housed in the main arena of the San Francisco Civic Auditorium, where you will have available in one place all the latest developments in medications, services, furniture, equipment, etc.

Your exhibitors value the opportunity of meeting with you at these meetings and it is hoped that all those attending the session will take a little time to show their appreciation to their many friends in the pharmaceutical and other fields which serve the medical profession.

Economically, the technical exhibitors contribute the largest part of the funds needed to stage the annual meetings; for this reason alone, they deserve the support of the members. More important, however, is the opportunity for CMA members to bring themselves up to date in the developments which come so rapidly and so frequently in the various aids to the practice of medicine.

Listed here are the exhibitors who will participate in the 1959 meeting, together with a brief description of their exhibits. Your time will be well spent with them.

Booth No.

ABBOTT LABORATORIES — 407-408
North Chicago, Illinois

The Abbott Laboratories exhibit will feature the three products which make up Abbott's Antibiotic Triad for control of all coccal infections: Erythrocin for staph-strep- and pneumococci, Spontin for coccal infections that hospitalize the patient, and new Compocillin-VK Filmtab and Oral Solution for penicillin-sensitive organisms. Also exhibited will be the Gradumet line—products in the new metered-release dose form developed by Abbott. Currently available are Gradumet Tral for peptic ulcer and Gradumet Desoxyn for obesity. Abbott's full line of nutritional supplements, including those in the new golden Tablet Bottle, as well as other specialties, will be displayed.

AMERICAN STERILIZER CO. — 108
Erie, Pennsylvania

Autoclaves—

1. Model 613-R—This is our new autoclave which has become exceedingly popular wherever it has been demonstrated throughout the country. Priced right and the finest in quality workmanship.

2. Model 8816—Square in size 8x8x16″ designed for increased loading capacity.

3. Model 1022—Size 10x10x22″—The unit for clinics or centralized sterilization. 10″ square—Autoclave requires no plumbing connections. Completely automatic.

Sterilizers—Two sized—8 and 16″ portable boiling type units.

AMES COMPANY, INC. — 306
Elkhart, Indiana

Featured at the Ames Company exhibit will be the latest developments in new, simplified diagnostic products, which are adaptable to routine examination and patient management. The many advantages of the new diagnostic products are quickly demonstrable, and you are cordially invited to stop at the Ames booth to see them.

AUDIO-DIGEST FOUNDATION — 521
Glendale

Audio-Digest Foundation—a subsidiary of the California Medical Association—gives the busy physician an effortless tour through the best of current medical literature each week. This medical tape-recorded "newscast"—compiled and reviewed by a professional Board of Editors—may be heard in the physician's automobile, home or office. The Foundation also offers medical lectures by nationally-recognized authorities.

AYERST LABORATORIES — 402
New York, New York

Physicians are cordially invited to visit the Ayerst booth where new and descriptive information will be available on 'Cothera,' our non-narcotic cough syrup, 'Kryl' for common colds, and other specialties of our manufacture.

BARNES-HIND LABORATORIES — 317
Sunnyvale

Barnes-Hind Laboratories will exhibit Tranquinal, Heb-Cort and Minims.

Tranquinal is a true daytime sedative, designed to raise the threshhold to anxiety states, thereby enabling the patient to carry on his normal daily routines.

The Heb-Cort Series combines Hydrocortisone Alcohol, U.S.P. in Heb Ointment base with Neomycin Sulfate, U.S.P., or Iodochlorhydroxyquin, U.S.P. Heb Ointment base has been demonstrated to be the best Ointment base for making these medicinal agents available to affected skin areas.

The Minims are Sterile Disposable Units of Sterile Ophthalmic Drops.

DON BAXTER, INC. — 307
Glendale

Don Baxter, Inc., will feature Stylex—an expendable hypodermic syringe; Sigmol—a sodium-free, nonirritating enema in a pre-packaged, disposable plastic container; and Novex—an expendable, plastic three-way stopcock with extension tube.

BEECH-NUT PACKING COMPANY — 414
Canajoharie, New York

The Beech-Nut Life Savers, Inc., cordially invites you to visit the Beech-Nut Baby Food exhibit.

Four nutritionists of the Beech-Nut Nutrition Staff will be present to introduce their complete line of Baby Foods. This includes Fruit Juices, Cereals, and Glass Packed Strained and Junior Foods. Recently a number of new varieties have been added to the Beech-Nut Baby Food

MEDICAL LIBRARY - UNIVERSITY OF MARYLAND

list and the nutritionists will be most happy to acquaint you with the new products.

BORCHERDT COMPANY 404
Chicogo, Illinois

Be sure to stop and sign up at the Borcherdt booth. In addition to sending samples and information on Malt Soup Extract for constipation and Pruritus Ani, Borcherdt will send you a 1/6 scale model skeleton. Very useful for office demonstration of fractures, etc.

THE BORDEN COMPANY 320
New York, New York

First among the many new items on display at the Borden Pharmaceutical Division booth this year is LIQUID BREMIL. Introduced only a few months ago, LIQUID BREMIL adds all the convenience of a liquid to all the significant advantages established by BREMIL Powdered. Borden representatives will be happy to tell you about the latest improvements in MULL-SOY, the original hypoallergenic formula. New additions to the Borden line in the field of skin care are DERMABASE, an all purpose ointment base, and JUNITAR, the nonstaining tar bath, as well as MARCELLE Hypoallergenic cosmetics, safe beauty aids for teenagers and grownups with sensitive skins.

BRISTOL-MYERS PRODUCTS DIVISION 110
New York, New York

BUFFERIN, the better-tolerated analgesic for long-term salicylate therapy, will be featured by Bristol-Myers. Also on view: Theraderm for dandruff control.

BURROUGHS WELLCOME & CO., INC. 401
Tuckohoe, New York

The extensive research facilities of 'B. W. & Co.', both here and in other countries, are directed to the development of improved therapeutic agents and techniques. Also much basic theoretical work in our laboratories and in cooperation with internationally known institutions is contributing to the reservoir of fundamental medical knowledge.

Through such research 'B. W. & Co.' has made notable advances related to leukemia, malaria, diabetes, and diseases of the autonomic nervous system; and to antibiotic, muscle-relaxant, antihistaminic, and antinauseant drugs.

An informed staff at our booth will welcome the opportunity to discuss our products and latest developments with you.

CAMERON SURGICAL INSTRUMENTS COMPANY 512
Chicogo, Illinois

The Cameron Surgical Instruments Company is showing many items of interest to the General Practitioner and Specialist. Our new Models 255 and 60 Electro-Surgical Units will be shown to the West Coast Doctors for the first time. The 255 represents the latest, most improved, complete office Electro-Surgical Unit; greatly improved cutting and coagulation currents; moderately priced; unconditionally guaranteed. The new Cameron 60 Electro-Surgical Unit is the complete Clinic or Operating Room unit. It provides tube cutting, tube coagulation, spark cutting, etc. Also see the new Binocular Loupes, Headlites and other diagnostic aids. Our trained representatives will be happy to meet and discuss your problems with you.

CANRIGHT CORPORATION 519
Glendale

You are cordially invited to visit our booth where our line of prescription specialty formulas will be displayed.

Descriptive literature and samples will be available for either your taking or to be sent to your home, or office as requested. Courteous, well-informed detail men will be in attendance and will welcome the opportunity of visiting with you.

CHICAGO PHARMACAL COMPANY 312
Chicogo, Illinois

The following CHIMEDIC products will be featured:

URISED: Nationally known and clinically proven tablet for both comfortable sedation and thorough antisepsis in all types of genito-urinary affections.

ESTROSED: The logical formula combining the most potent of the oral estrogens, ethinyl estradiol, and the safest of the tranquilizers, reserpine, for the effective treatment of the menopausal syndrome in an easily administered, pleasant tasting tablet form.

JUNIPLEX: Deliciously flavored tonic for all ages containing the essential minerals plus the entire B complex including B_{12}.

CIBA PHARMACEUTICAL PRODUCTS, INC. 423-424
Summit, New Jersey

The CIBA exhibit will feature Tessalon, a new agent to control cough. This preparation differs from other cough preparations in that it acts locally and it also suppresses the transmission of the cough reflex from the cough reflex center in the medulla. It is also in a very handy oral form as Perles, which are designed for immediate release and rapid transmission to the blood stream.

THE COCA-COLA COMPANY 418
Atlanta, Georgio

Ice-cold Coca-Cola served through the courtesy and cooperation of The Coca-Cola Bottling Company of California, San Francisco, California, and The Coca-Cola Company.

CORECO RESEARCH CORPORATION 412
New York, New York

The Coret camera embodies the principle of electronic flash and constant automatic control of such factors as distance, aperture, field and exposure. Now, for the first time, Coreco offers a completely automatic professional clinical camera purposely designed to achieve the ultimate in surface, intra-oral, and intra-tubular photography. Because of the simplicity of operation, even an inexperienced doctor or nurse can achieve consistently perfect color transparencies.

CUTTER LABORATORIES 606
Berkeley

Cutter Laboratories will feature Barbicaine, the new antispasmotic for use in treating infant colic. Other specialties to be exhibited are Undesilin Powder and Ointment for athlete's foot; Polysal Elixir, a solution of balanced electrolytes for oral use; and Polysal K-P, containing balanced electrolytes plus kaolin and pectin. Cutter's complete line of blood fractions will be displayed, namely Polio Immune Globulin, Hyparotin, Hypertussis, Albumin, and Parenogen. Also shown are Adult Dip-Tet for use in

boosters and immunization of adults against diphtheria and tetanus; R-Gene for use in hepatic coma; and Cutter's complete line of intravenous solutions together with their Saftiflex Blood Bag.

DARWIN LABORATORIES 111
Los Angeles

LH 400 (LIPO-HEPIN), sodium heparin, U.S.P. 400 mgs. per cc, allows a significant increase in efficiency of anticoagulant and lipoprotein lipase response. Administration and control problems usually associated with heparin therapy, are essentially eliminated. Other heparin concentrations and other products will be discussed.

DESITIN CHEMICAL COMPANY 225
Providence, Rhode Island

DESITIN OINTMENT: Pioneer CLO ointment for treatment of: burns, ulcers, diaper rash, abrasions, etc.

DESITIN POWDER: Saturated with CLO, dainty, relieves chafing, sunburn, diaper rash, etc.

DESITIN HEMORRHOIDAL SUPPOSITORIES, and RECTAL OINTMENT: Relieve pain and itching, promote healing, give comfort in uncomplicated hemorrhoids, fissures. No anesthetics or styptics.

DESITIN BABY LOTION: Protective, antiseptic, emollient, contains no mineral oil, cleanses baby skin with tender care.

DESITIN ACNE CREAM: A non-staining, flesh-tinted "Medicream" for the treatment of Acne Vulgaris, skin blemishes, effective in removal of skin oiliness. Antiseptic.

DESITIN COSMETIC AND NURSERY SOAP: Supermild, pleasantly scented, antiseptic and deodorant.

THE DEVEREUX FOUNDATION 413
Santa Borboro

Representatives are available to discuss the Devereux plan of education with therapy for children with emotional disturbances and/or learning disabilities. Referring physicians are invited to meet with members of the California Branch Schools to discuss the needs, adjustment and progress of their young patients presently enrolled.

This non-profit organization provides a treatment program for students who can profit from specialized psychiatric, psychological and educational guidance in a coeducational residential school environment.

THE DIETENE COMPANY 302
Minneapolis, Minnesota

Have YOU *tasted* MERITENE . . . the whole protein supplement that DOES taste good? Visit our booth, enjoy a MERITENE Milk Shake with its multiple nutritive values.

While you're there, review the Dietene Diet based on DIETENE Reducing Supplement. It provides the rare combination of low calories (1000) with high intake of protein and all essential vitamins and minerals in an interesting, effective, SAFE weight reducing diet.

DOHO CHEMICAL CORP. 305
New York, New York

DOHO CHEMICAL CORPORATION is pleased to exhibit: AURALGAN—Otitis Media and removal of cerumen. OTOSMOSAN—Fungicidal and bactericidal in the suppurative and aural dermatomycotic ears. RHINALGAN—Nasal decongestant free from systemic or circulatory effect. LARYLGAN—Throat spray and gargle for infectious and noninfectious sore throat involvements.

Mallon Chemical Corporation: RECTALGAN—For relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing. DERMOPLAST—An Aerosol spray for surface pain, burns and abrasions; Obs. & Gyn. use.

DOME CHEMICALS, INC. 213
New York, New York

EATON LABORATORIES 416
Norwich, New York

Furadantin, a specific for urinary tract infections, provides rapid bactericidal action against a wide range of gram-positive and gram-negative bacteria and organisms resistant to other agents. In six years of extensive use in the treatment of genitourinary tract infections, development of bacterial resistance remains negligible with Furadantin.

Stop diarrhea with Furoxone (brand of furazolidone) Liquid. Solves acute diarrheal disease problems . . . Swiftly relieves symptoms. Rapidly destroys bacterial pathogens (bactericidal rather than bacteriostatic). Succeeds where others fail against the enteric "problem pathogens"—increasingly prevalent, refractory strains of Staphylococcus, Eschorichia, Salmonella and Shigella. Furoxone Liquid does not create new problems; does not upset the balance of normal intestinal flora; does not encourage monilial or staphylococcal overgrowth; does not induce significant bacterial resistance.

EISELE & COMPANY 415
Noshville, Tennessee

Eisele & Company will display their regular line of clinical thermometers, hypodermic syringes, both the regular type and the interchangeables; hypodermic needles, ECO bandages and specialty glassware.

ENCYCLOPAEDIA BRITANNICA 604
Los Angeles

The ENCYCLOPAEDIA BRITANNICA will feature the new 1959 Edition, just coming off the presses, in combination with the BRITANNICA JUNIOR, published by Britannica for preschool and elementary grades—both at a SPECIAL EXHIBIT PRICE to members of the California Medical Association. Also featured will be the Year Book and Research Services, the famous Seven Language Dictionary published by Britannica and its equally famous World Atlas. Members of the convention are invited to register at the booth for a free drawing on the Britannica World Atlas, to be given away at the convention.

ENDO LABORATORIES 603
Richmond Hill, New York

COUMADIN tablets and ampoules, "the most ideal anticoagulant." PERCODAN tablets (dihydrohydroxycodeinone plus APC) the improved analgesic, for moderate pain. HYCODAN and HYCOMINE Syrups (dihydrocodeinone) for control of cough. NUMORPHAN tablets, ampoules and suppositories—the improved analgesic for severe pain.

CHARLES O. FINLEY & COMPANY 601
Chicago, Illinois

Representatives of Charles O. Finley & Co., administrators of the California Medical Association group disability in-

surance program, will be on hand to describe the program to eligible members and to answer your questions. You are invited to come in, sit down and relax.

C. B. FLEET CO., INC. 502
Lynchburg, Virginia

Fleet will feature CLYSMATHANE, its most recent contribution in the field of medication by rectum—an advanced method of xanthine therapy. CLYSMATHANE is a stable solution of theophylline monoethanolamine; easily retained; rapid and uniform absorption, prompt and predictable blood levels, with no rectal irritation after prolonged use. CLYSMATHANE, in a disposable rectal unit, makes self administration easy any time and any place—and assures prompt therapeutic blood levels. Examine the unit and ask that samples and literature be mailed to your office.

FOREMOST DAIRIES, INC. 503
San Francisco

FOREMOST "Fresher Tasting" Evaporated Milk is the first to be processed by High-Temperature Short-Time sterilization, "flash cooled," then sealed into plastic-lined sterilized cans to protect its fresher flavor.

FOREMOST "Fresher Tasting" Evaporated Milk includes all the quality and nutrition found in the best evaporated milks plus—Flavor—Color—and Aroma akin to fresh pasteurized milk, and greater retention of Vitamin B_{12}.

On request, nutritional data and samples of FOREMOST will be mailed to your office or home.

Refreshing "Egg Nog" made from this modern product will be served at the Booth.

E. FOUGERA & COMPANY 212
New York, New York

You are invited to visit the Fougera Exhibit and discuss our products with medical service representatives. For your convenience, all literature and sample supplies will be sent to your office.

GEIGY PHARMACEUTICALS 102
Yonkers, New York

Geigy Pharmaceuticals extends a cordial invitation to members of the Association to visit their exhibit. Reports of the most recent clinical research studies regarding BUTAZOLIDIN, PRELUDIN, STEROSAN WITH HYDROCORTISONE AND DULCOLAX will be presented by the staff in attendance.

GENERAL FOODS CORPORATION 610 & 611
White Plains, New York

We will display and discuss both regular Sanka and Instant Sanka Coffees, and serve the latter. You are invited to stop by our booth for a cup of INSTANT SANKA, the hearty coffee that is 97% caffein-free . . . the answer for patients unable to drink regular coffee. While at our booth, register for samples and, for your patients, a supply of our folder, WHAT EVERY COFFEE LOVER SHOULD KNOW ABOUT CAFFEIN.

GERBER PRODUCTS COMPANY 104
Fremont, Michigan

Symptoms of gastrointestinal allergy in infants can, in a high percentage of cases, be corrected when cow's milk feedings are replaced with Gerber Meat Base Formula. Normal nutrition is assured. Acceptance and toleration are excellent.

Gerber's HIGH MEAT DINNERS provide more than nine grams of protein per container. With Gerber High Protein Cereal and the Meats-for-Babies, they offer a wide choice of well accepted foods that abundantly supply complete proteins.

H. J. HEINZ COMPANY 505
Pittsburgh, Pennsylvonio

See the eight new HEINZ HIGH MEAT DINNERS—Strained and Junior Foods for babies—containing substantial amounts of beef, veal, chicken or ham respectively, all with vegetables. These are meant to be "main dishes" and are rich sources of meat proteins.

Now, for welcome convenience, Heinz has four fruits and desserts with screw caps. In addition to Heinz Orange Juice for babies, there are five new Heinz Fruit Juices: Apple, Apple Juice with Apricots, Apple-Grape, Apple Juice with Pineapple, and Apple-Prune.

There is also for you, doctor, Nutritional Data, and a very informative book "A.B.C.'s of Prenatal Care" for expectant parents.

HERMIEN NUSBAUM & ASSOCIATES 515
Chicago, Illinois

HOLLAND RANTOS COMPANY, INC. 421
New York, New York

Visit the H-R booth where representatives will demonstrate the mechanical advantages of the contouring KORO-FLEX DIAPHRAGM.

Also on display will be the new improved NYLMERATE JELLY and NYLMERATE SOLUTION for treatment of vaginal leucorrheas.

Exhibited for the first time will be the new KOROMEX "A" vaginal preparation for use where jelly-alone is indicated.

Representatives will gladly explain the many indications for use, in your practice, of HOLLANDEX Silicone Ointment—medicated preparation for minor skin disorders of infants, children and adults.

IRWIN, NEISLER & CO. 522
Decotur, Illinois

Neisler features RYNATAN, a major advance in the treatment of coryza, sinusitis, and allergic rhinitis, in two dose forms—tabules and suspension.

RYNATAN is the first long-acting, oral nasal decongestant in liquid form. It provides prompt, effective 10-12 hour relief with controlled absorption of medication in a single oral dose. It quickly clears air passages, relieves frontal headaches, and stops the nasal discharge, lacrimation, and itching of eyes and nose.

Clinical studies show RYNATAN has a remarkable lack of side effects. No drowsiness, dizziness, or G.I. disturbances typical of antihistamine therapy have been reported. It combines three new effective tannate compounds: Phenylephrine tannate, an oral vasoconstrictor for nasal decongestion and sinus drainage; Prophenpyridamine tannate and Pyrilamine tannate, two excellent antihistamines, acting synergistically to prolong blockage of histamine response in a variety of allergic disorders.

LEDERLE LABORATORIES 316
New York, New York

ELI LILLY AND COMPANY 319 ond 406
Indionopolis, Indiano

You are cordially invited to visit the Lilly exhibit located in booths 319 and 406. The Lilly sales people in attendance welcome your questions about Lilly products and recent therapeutic developments.

J. B. LIPPINCOTT COMPANY 507
Philodelphio, Pennsylvanio

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing.

LLOYD BROTHERS, INC. 517
Cincinnoti, Ohio

Featured will be—Doxical—Calcium bis (dioctyl sulfosuccinate), the completely new, doubly effective surfactant in constipation. Doxical produces soft feces with resultant easier evacuation. Doxical has double the surfactant action of the older softening agents, and is the most effective fecal softener. Doxical is physiologically inert and not systemically absorbed.

LOMA LINDA FOOD COMPANY 420
Arlington

With the background of years of experience in perfecting a hypoallergenic milk powder, and also a newly developed concentrated liquid milk the protein of which is fully derived from the soy bean and formulated with other essential additives to care for the needs of babies, growing children, and adults, the Loma Linda Food Company will be happy to welcome you to their exhibit. Attendants will be pleased to discuss the values of Soyalac powder and concentrated liquid. Samples of this flavorful product will be served at the exhibit.

P. LORILLARD COMPANY 612
New York, New York

P. Lorillard Company invites you to visit the Kent Cigarette Exhibit.

We are presenting the Story of Kent Cigarettes and their unique filter which is more efficient than any other now on the market according to several independent research groups.

A table cigarette box with your signature in gold will be a pleasant souvenir of your visit to the convention.

LO-SODIUM DAIRY PRODUCTS CORP. 405
Venice

Lo-Sodium Dairy Products Corporation will exhibit two new products along with their fresh low sodium milk. The new products are a non fat low sodium dry milk powder and a canned low sodium whole milk. The powder is designed specifically for those patients who are restricted in calories and cholesterol and yet are in need of the many nutrients found in milk. The "Low Sodium Story" will be shown on rotating slides.

LOV-E BRASSIERE COMPANY 318
Hollywood

You are invited to view our complete line of custom-fitted brassieres designed to provide corrective support for specific breast conditions in exact accordance with the physician's instructions. We also would like to show you our new and improved breast prosthesis, the Lov-e "Twin" breast form. This new form provides adjustable weight for perfect balance, ideal for all occasion wear, custom-fitted and weight adjusted to the individual's need. Our special representatives will be happy to greet you and answer any questions.

MAICO ELECTRONICS, INC. 211
Minneapolis, Minnesoto

Association members are invited to discuss the latest advances in the field of medical acoustical instruments with Herman G. Wallenfels, San Francisco representative of Maico Electronics, Inc. (booth 211). The pioneer Minneapolis, Minn., hearing research firm will show the latest of their complete line of clinical and pocket audiometers, and the improved Maico Stethetron for accurate selective amplification of body sounds. New developments in eyeglass and conventional hearing aids will also be featured.

MALTBIE LABORATORIES 221
Bellville, New Jersey

Maltbie Laboratories Division of Wallace & Tiernan, Inc. features the new dermatologic ointment, Caldecort, containing calcium undecylenate, hydrocortisone and neomycin for a comprehensive therapy of skin conditions caused by fungi, bacteria or allergy. Also exhibited are: Desenex, the most widely prescribed agent for night and day treatment of athlete's foot; Nesacaine, the first local anesthetic more potent yet less toxic than procaine, and Bifran, to treat the consequences as well as the condition of obesity.

S. E. MASSENGILL COMPANY 209
Bristol, Tennessee

Best wishes from Massengill to the members of the California Medical Association for a most successful and informative meeting. Company representatives will be present to answer any questions on Massengill preparations in which you may be interested. Products being featured are Adrenosem (the unique systemic hemostat); Homagenets (the only solid homogenized vitamin); Obedrin (superior weight reducing aid); the Salcort Family (a complete range of arthritic therapy); Livitamin (the rapid acting tonic); Massengill Powder (the douche preparation of choice). Literature and samples available on request.

MARLYN COMPANY, INC. 219
Los Angeles

Marlyn Company, Inc., cordially invites you to visit booth 219. A staff of competent representatives will be on hand to discuss products of our manufacture with you. Test-Estrin Vaginal Insert will be featured.

McNEIL LABORATORIES 304
Philadelphia, Pennsylvanio

Members of the California Medical Association are cordially invited to visit our booth 304, Mr. H. A. Harley in charge. Products to be features are: Butiserpine, Butisol Sodium, Paraflex, Parafon and Tylenol.

MEAD JOHNSON & COMPANY 520
Evansville, Indiana

The Mead Johnson exhibit has been arranged to give you the optimum in quick service and product information. To make your visit productive, specially trained representatives will be on duty to tell you about their Formula Products Family; the Colace Products Family; Tempra, the first physician-controlled antipyretic analgesic in two liquid dosage forms; and Sustagen, the only single food complete in all essential nutrients.

THE MEDICAL PROTECTIVE COMPANY 218
Fort Wayne, Indiana

For thirty-six years The Medical Protective Company has continuously participated in the California Medical Association's annual meetings, presenting the sound, sensible, individual plan of professional liability insurance that has served to reduce the doctor's professional liability problems with superlative success. Now, in our sixtieth year of exclusive application to this field, the unparalleled experience, gained from the successful handling of more than 78,000 claims and suits, provides a priceless ingredient of the Specialized Service that makes our doctor safer. We Practice Prevention.

MERCK SHARP & DOHME 301
Philadelphia, Pennsylvania

A new and very promising diuretic is featured at the Merck Sharp & Dohme booth. Since the principal action of 'Diuril' is a marked enhancement of the excretion of sodium, chloride and water, it has been designated a saluretic agent. This new compound achieves a profound electrolyte and water diuresis without attendant toxic effects and other disadvantages peculiar to the mercurials and certain other diuretic agents.

Technically trained personnel will be present to discuss this and other subjects of clinical interest.

THE WM. S. MERRELL COMPANY 605
Cincinnati, Ohio

Quiactin for quieting . . . an improvement over present tranquilizers for tension-anxiety states; patients remain alert, feel better.

You are invited to discuss this and other Merrell research products with our representatives.

MILEX-FERTILEX CO. 222
Los Angeles

We invite your attention to our group of instruments for Cancer Screening. Also, to our New Instruments for Cervical Biopsy and to our scientifically designed line of proved quality Gynecic Products.

MILLER SURGICAL COMPANY 205
Chicago, Illinois

Electro-Surgical and diagnostic specialties; featuring the Rudolph V. Gorsch, M.D., line of rectal scopes for surgical and diagnostic procedures. A new Electro-Scalpel having the prime features of the larger hospital units which gives hospital efficiency in your office.

THE C. V. MOSBY COMPANY 112
St. Louis, Missouri

You are invited to examine the latest medical and surgical publications of the C. V. Mosby Company. Among the new releases are featured: Stephenson "Cardiac Arrest and Resuscitation"; Mosely "Textbook of Surgery"; Lichtenstein "Bone Tumors"; Moss "Therapeutic Radiology"; Ackerman "Surgical Pathology"; Prior & Silberstein "Physical Diagnosis"; Rusk "Rehabilitation Medicine"; Cowdry "Care of the Geriatric Patient"; Duke-Elder "The Eye in Evolution"; Patton "Pediatric Index."

THE NATIONAL DRUG COMPANY 321
Philadelphia, Pennsylvania

The National Drug Company exhibit highlights Parenzyme Aqueous, Parenzyme-B (Buccal) and Parenzyme Ointment. The efficacy of the anti-inflammatory, anti-edema agents Parenzyme Aqueous and Parenzyme-B has been clinically substantiated for the treatment of traumatic wounds, ulceration, phlebitis, occular inflammation and for loosening of bronchial plugs in severe pulmonary disease. Our representatives anticipate discussing with you the latest advance in Enzyme therapy in the form of Parenzyme-B (Buccal) and Parenzyme Ointment.

THE NETTLESHIP COMPANY 203
Los Angeles

Administrators of Professional Liability, Group Accident and Sickness, and Life Insurance Programs for County Medical Associations in Southern California.

Qualified representatives available to discuss problems pertaining to hospital or individual professional liability coverage, accident and sickness, life, or other types of insurance.

Literature, which will assist in the prevention of claims and various forms to be used to protect, as far as possible, against malpractice claims.

NEW LIFE POST SURGICAL PRODUCTS 509
San Francisco

NORDSON PHARMACEUTICAL LABORATORIES 214
Irvington, New Jersey

Levonor, a new compound for suppression of appetite without CNS overstimulation, will be featured. The smooth action of Levonor permits its use during evening hours; it may be given as late as 8 p.m. without keeping the patient awake. Latest clinical studies will be available. Also displayed: Ferronord Liquid and Ferronord tablets —the chelate hematinic that provides more rapid hemoglobin response with virtually no undesirable side effects.

ORGANON INCORPORATED 308
Orange, New Jersey

Physicians are cordially invited to visit the Organon booth for information on new therapeutic specialties. Included among these will be: Electrolytic Cortrophin-Zinc, the newly improved advanced ACTH; Adrestat, the complete systemic hemostat; Migraine, the complete treatment for migraine and other vascular headaches; Medache, the new and safe analgesic calmative for headaches; and Liquaemin Sodium, America's first and purest heparin. Organon representatives will be pleased to discuss these advances in therapy with all interested physicians.

ORTHO PHARMACEUTICAL CORPORATION 106
Raritan, New Jersey

Ortho cordially invites you to booth 106. Featured will be Delfen Vaginal Cream, Ortho's most spermicidal

contraceptive. DELFEN Vaginal Cream has a high concentration of a new, most potent, well tolerated spermicide. Since the spermicide is in the water phase of an oil-in-water emulsion, it rapidly invades seminal fluids, killing sperm on contact. It is emollient and nonirritating to vaginal tissues. ORTHO representatives will be glad to discuss this and our other products with you.

PARKE, DAVIS & COMPANY 101
Detroit, Michigan

Members of our medical service staff will be in attendance at our exhibit to discuss important Parke-Davis specialties which will be on display.

PEPSI-COLA COMPANY 313
Beverly Hills

An outstanding Pepsi-Cola display booth will be used with an electrical premix unit behind it from which Pepsi-Cola will be served to all in attendance.

PERSON & COVEY 607
Glendale

Person & Covey representatives will be on hand to discuss our most recent medical specialties with you.

PICKER X-RAY CORPORATION 224
White Plains, New York

Picker X-Ray Corporation will display its OR 300MA Mobile X-Ray Unit. This is the first high powered mobile x-ray machine expressly designed for use in a hazardous explosive atmosphere and approved by the Underwriters' Laboratories for this purpose. The entire generating system, tube and cables, are pressurized to prevent explosive gases from entering and the moment an unsafe condition exists a warning light flashes and operation is immediately shut off.

An easy to operate monitor control precludes the possibility of technical error. The unit moves with ease, and is remarkably flexible in its application to operating room or conventional radiographic use.

Picker will also display several radiographs of general interest.

PITCHER ELECTRONICS, INC. 523
Brea

Featured at our booth will be the items manufactured by MEDCO PRODUCTS, of Tulsa, Oklahoma. These items will include all their products, from the earliest MEDCOLATOR to the newest item in physical medicine. Factory trained personnel will be on hand to answer your questions regarding any of these products.

THE PURDUE-FREDERICK COMPANY 504
New York, New York

The Purdue-Frederick Company will present: CERUMENEX: A cerumenolytic containing Cerapon, an effective new surfactant; SOMATOZYME: Growth and appetite stimulant containing B_{12}, d-sorbitol and a multivitamin formula; SENOKOT: Neuroperistaltic constipation corrective containing total concentrated senna glycosides; SENOKAP: Senokot plus stool softener, dioctyl sodium sulfosuccinate; SENOKOT x/ PSYLLIUM: Senokot with a bulk agent; and SENOBILE: Senokot plus bile salts.

R. J. REYNOLDS TOBACCO COMPANY 207
Winston-Salem, North Carolina

Welcome to the R. J. Reynolds Tobacco Company Exhibit! You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, WINSTON Filter, Menthol Fresh SALEM, or CAVALIER King Size Cigarettes.

A. H. ROBINS COMPANY, INC. 323
Richmond, Virginia

Physicians attending the meeting of the California Medical Association are extended a cordial invitation to visit the exhibit of the products of the A. H. Robins Company.

Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins prescription specialties.

ROCHE LABORATORIES 513
Nutley, New Jersey

MADRIBON, a completely new, low-dosage antibacterial distinguished by particular therapeutic effectiveness in upper respiratory infections. Findings in approximately 5000 clinical subjects demonstrate that low doses of MADRIBON, administered at 24-hour intervals provide good to excellent results in over 85% of the patients. MADRIBON is characterized by a high degree of safety plus a notable absence of skin rashes.

J. B. ROERIG AND COMPANY 322
New York, New York

J. B. ROERIG AND COMPANY, Booth 322, will feature TAO (pronounced Tay-o), a new antibiotic derivative designed for superior control of common infections due to gram-positive and some gram-negative organisms. Literature and samples are available at the booth which physicians and their guests are cordially invited to visit.

ROSS LABORATORIES 206
Columbus, Ohio

As adjunct to the physician's oral reassurance of anxious new parents the ROSS DEVELOPMENTAL SERIES offers visual materials (INDIVIDUAL CASE RECORDS, BEHAVIORAL DEVELOPMENT FOLDERS, EMOTIONAL DEVELOPMENT BOOKLETS). Current concepts stress the development of the infant as a whole being. Physiologic infant feeding may be discussed with your SIMILAC representatives.

SANBORN COMPANY 525
Waltham, Massachusetts

Visitors at the Sanborn Company booth 525 will have full opportunity to see and have demonstrated the outstanding new portable VISETTE (18-pound, transistorized ECG) together with the popular Model 51 Viso-Cardiette, as well as latest models of other instruments for cardiovascular (and other) diagnostic use.

In addition, there will be demonstrations and/or data available on all Sanborn research recording systems—direct-writing, photographic and tape; on supplementary oscilloscopes; and on physiologic transducers.

SANDOZ PHARMACEUTICALS 422
Hanover, New Jersey

Sandoz Pharaceuticals cordially invites you to visit our display at booth 422. BepHan—Space Tabs new approach to prolonged maintenance of low gastric acidity.

BELLERGAL—Space Tabs assures around the clock control of functional complaints (example—menopause symptoms) in the periphery where they originate. FIORINAL—A new approach to therapy of tension headache and other head pain due to sinusitis and myalgia. Any of our representatives in attendance will gladly answer questions about these and other Sandoz Products.

W. B. SAUNDERS COMPANY 506
Philodelphia, Pennsylvania

Among the newest Saunders titles published in the last few months are: Roberts "Difficult Diagnosis"; DePalma "Fractures and Dislocations"; Lewis "Dermatology"; Turell "Colon and Anorectum"; and Wohl "Long-Term Illness."

SCHENLABS PHARMACEUTICALS, INC. 608 & 609
New York, New York

SchenLabs cordially invites you to discuss with our representatives the important new discovery NEUTRAPEN—the only specific for penicillin reactions which eliminates successfully about 97% of allergic reactions to penicillin within a few hours. Also featured will be other unique products of SchenLabs research and development progress.

SCHERING CORPORATION 103
Bloomfield, New Jersey

Schering Corporation extends a cordial invitation to the doctors of California to visit the Schering exhibit to discuss new developments in the steroid and tranquilizer areas of therapy. Courteous representatives will be on hand to discuss products of Schering manufacture such as TRILAFON, POLARAMINE and the "Meti" steroids.

JULIUS SCHMID, INC. 303
New York, New York

An interesting and informative exhibit featuring IMMOLIN Cream-Jel for use without a diaphragm; RAMSES Flexible Cushioned Diaphragm; RAMSES Vaginal Jelly; VAGISEC Jelly and Liquid for vaginal trichomoniasis therapy; and XXXX (Fourex) Skin Condoms, RAMSES and SHEIK Rubber Condoms for the control of trichomonal re-infection.

G. D. SEARLE & CO. 324
Chicogo, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Dartal, the new tranquilizing agent which controls activities associated with anxiety states and other neuroses; Enovid, the new synthetic steroid for treatment of various menstrual disorders; Zanchol, a new biliary abstergent; Nilevar, the new anabolic agent, and Rolicton, a new safe, non-mercurial oral diuretic.

Also featured will be Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Pro-Banthine and Pro-Banthine with Dartal, the standards in anti-cholinergic therapy; and Dramamine and Dramamine-D, for the prevention and treatment of motion sickness and other nauseas.

SEVEN UP BOTTLING COMPANY 602
Son Froncisco

Display of vending machines and pre-mix coolers for Seven Up. Free Seven Up to be given to everyone.

SHERMAN LABORATORIES 315
Detroit, Michigon

ELIXOPHYLLIN—Severe asthmatic attacks are not merely relieved, but *terminated* in 10 to 20 minutes by Elixophyllin, given *orally*. In milder attacks, its speed has been described as "instantaneous."

Vital capacity increases were noted as soon as 5 minutes after administration. Pick up these data and reports on their clinical significance at the Sherman booth.

SMITH, KLINE AND FRENCH LABORATORIES 105
Philodelphio, Pennsylvonio

S.K.F. features (1) Temaril Tablets, an oral medication for the relief of itching, regardless of cause—and the new dosage form, 'Temaril' Syrup, especially for the control of itching in children; (2) Vi-Sorbin, a potent modern tonic containing B_{12}, B_6, iron, folic acid and the Absorption Enhancement Factor, D-Sorbitol; (3) Compazine, the tranquilizer and antiemetic virtually free from drowsiness and depressing effect; (4) Thorazine, one of the fundamental drugs in medicine; and (5) Spansule *sustained release* capsule preparations, each providing both prompt and sustained therapeutic effect.

E. R. SQUIBB & SONS 501
New York, New York

E. R. Squibb & Sons has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the Medical Profession in new products or improvement in products already marketed.

At booth 501 we are pleased to present up-to-date information on these advances for your consideration.

J. W. STACEY COMPANY 201 & 202
Son Froncisco

Stacey's, established for over 35 years, provides the doctor in the West with a source of supply of all medical books. At booth numbers 201 and 202 you'll find on display the latest books in medicine, surgery and the specialties. You are invited to browse at your leisure.

THE STUART COMPANY 107
Posodeno

The Stuart Company will feature Stuart Formula as well as their line of Softab products: Orexin, Mulvidren, Bucladin and Softran. These Softabs are pleasant tasting and melt so quickly in the mouth. Literature and samples of other products will also be available.

TAILBY-NASON COMPANY, INC. 311
New York, New York

BETADINE ANTISEPTIC—A new iodine complex devoid of iodine burn. Non-irritating film forming germicide fungicide for use as topical antiseptic and therapeutic bactericide. Betadine exhibits all of iodine's potent microbicidal activity and is especially effective against antibiotic resistant Staph. Aureus. Betadine is available in solution and Aerosol Spray and Vaginal Douche.

Also on display will be SUPERTAH "white coal tar" Ointments in three forms: plain, with Sulfur and Salicylic Acid, and with Hydrocortisone. These cosmetically elegant, stainless ointments are indicated for such resistant dermatological conditions as psoriasis, dermatophytosis, pruritus and infantile eczema.

TESTAGAR & CO., INC. 508
Detroit, Michigon

Stop by and see Q Caps-Amodex, the newest concept in time release capsules. It's clever! It's unique! Q Caps-Amodex for high level anorexigenic activity without excitation. Q Caps-Amodex insures accurate time release.

TRU-EZE MANUFACTURING CO., INC. 403
Burbank

Our exhibit will show the ease of administering intermittent traction in the office and the versatility of the TRACTOMATIC, portable intermittent traction machine. Simplicity of operation permits you to see other patients while treatment is in effect.

The TRACTOMATIC is cool running and ruggedly constructed. Precision built to last. It is the only economically priced unit that will approach 100 lbs. of traction pull and still return to zero.

Smooth, gentle and firm vertical cervical traction or horizontal, cervical and lumbar traction is provided with the TRACTOMATIC from any angle, height or position. Economical counter-traction accessories also demonstrated.

U. S. VITAMIN CORPORATION 419
New York, New York

On display—AQUASOL A—the original *aqueous*, natural high potency Vitamin A in capsules and drops. Provides faster, more complete *absorption* and utilization of Vitamin A than the oily form. AQUASOL A is indicated for use in acne, chronic eczemas, dry skin, metaplasia of the mucous membranes, follicular hyperkeratosis, lowered resistance to infections, night blindness and xerophthalmia.

THE UPJOHN COMPANY 417
Kalamozoo, Michigon

WALKER LABORATORIES, INC. 524
Mount Vernon, New York

PEPTOLIN, a tonic for relief of chronic fatigue, will be featured. PEPTOLIN is a palatable, deep brown elixir, with a sparkling sherry wine base—providing a mood elevator and energizer with vitamins, iron, minerals and bioflavonoids.

GERALIN, a comprehensive "one-capsule-daily" dietary supplement as an aid toward better nutrition, continuing health and vigor. Supplied in a most appealing and pharmaceutically elegant apothecary jar.

HEDULIN, the oral anticoagulant of choice. Full details pertaining to the drug and reprints of all medical papers are available in complete portfolio form.

Other features will include: PRECALCIN, BACIMYCIN and VIACETS.

WALLACE LABORATORIES 518
New Brunswick, New Jersey

The representatives of Wallace Laboratories will be glad to discuss MEPROSPAN with doctors in attendance at booth 518. MEPROSPAN is the prolonged release capsule of meprobamate, well known under the trade name of MILTOWN. This dosage form offers many advantages in maintaining continuance drug levels in reducing the quantity of meprobamate necessary to maintain tranquility. Your visit will be appreciated at the Wallace booth.

WARNER-CHILCOTT LABORATORIES, INC. 204
Morris Ploins, New Jersey

A visit to the Warner-Chilcott booth will be well worth while, especially in the interests of your cardiovascular patients, and those with mental or emotional disturbance. The booth features two clinically tested and proven agents: *Peritrate*—to aid you in the management of patients with angina pectoris; and *Pacatal*—a profound ataractic agent with a "normalizing" action. We are also featuring *Gelusil*—the physician's antacid—for the relief of gastric hyperacidity and management of peptic ulcer. Clinically superior because it is nonconstipating. Ideally suited for the peptic ulcer patient because it contains no laxative which might cause irritation and hypermotility.

WESTERN SURGICAL SUPPLY COMPANY 409-410
Los Angeles

WESTWOOD PHARMACEUTICALS 215
Buffolo, New York

FOSTEX CREAM and FOSTEX CAKE are new, easy to use, therapeutically effective medications for the treatment of acne, dandruff and seborrheic dermatitis. They contain Sebulytic T (lauryl sulfoacetate, alkyl aryl polyether sulfonate and dioctyl sulfosuccinate), a unique combination of penetrating anionic soapless cleansers and wetting agents which are highly antiseborrheic and exert antibacterial and keratolytic effects . . . enhanced by sulfur, salicylic acid and hexachlorophene.

FOSTEX CREAM is applied as a therapeutic skin wash in the initial treatment of acne, when maximum degreasing and peeling are desired. FOSTEX CAKE is used as a therapeutic skin wash for maintenance therapy to keep the skin dry and substantially free of comedones. FOSTEX CREAM is also used as a therapeutic shampoo in dandruff.

WHITE LABORATORIES, INC. 208
Kenilworth, New Jersey

White Laboratories exhibit features: OTOBIOTIC—a potent antibiotic-antifungal topical otic solution. OTODYNE—for rapid and prolonged relief of otalgia and otic pruritus. OTOMIDE—provides a therapeutic and cleansing action in an otic solution. ORABIOTIC—a chewing gum troche containing neomycin and gramicidin effective against common orapharyngeal pathogens, plus a topically potent local analgesic. MOL-IRON PRENATAL—economical one tablet per day prenatal vitamin-mineral with exclusive, better tolerated Mol-Iron. MOL-IRON PRODUCTS—for more effective treatment of anemias, and for unmatched tolerance. DELECTAVITIES—a comprehensive, one-a-day vitamin-mineral supplement in a chocolate-like nugget, especially useful in children who have reached the "chewing" age.

WINTHROP LABORATORIES 220
New York, New York

Featuring Plaquenil, a new Aralen derivative which is remarkably effective in inducing remissions in rheumatoid arthritis. Pharmacologically, Plaquenil has approximately 1/5th the toxicity of chloroquine; clinically, the incidence of side effects is markedly reduced.

WOODSIDE ACRES 223
Redwood City

Woodside Acres Hospital exclusively for the treatment of alcoholism. Conditioned Response Therapy method based on the theory that alcoholism is predominantly a physiological demand for alcohol.

1959 Annual Session

SAN FRANCISCO • FEBRUARY 22-25

- General Scientific Meetings • Postgraduate Courses
 Technical Exhibits • Scientific Exhibits
- Medical Motion Pictures
- President's Dinner Dance
 Tuesday, February 24 • Garden Court, Sheraton-Palace Hotel
- House of Delegates
 Sunday, February 22 • Wednesday, February 25
- Registration Daily
 8:30 a.m. to 5:30 p.m. . . . No Registration Fee

PLEASE MAKE HOTEL ROOM RESERVATIONS ONLY THROUGH C.M.A. OFFICE IN SAN FRANCISCO. USE RESERVATION REQUEST FORM ON PAGE 63.

PRE-CONVENTION REPORTS

Officers • Councilors • Committees

REPORTS OF GENERAL OFFICERS

REPORT OF THE PRESIDENT

To the House of Delegates:

During the past several months it has been my pleasure and privilege to report on the activities of the California Medical Association to those Southern California county medical societies not included in my earlier schedule of visits. I have also reported to several of the districts of the Los Angeles County Medical Association.

Following the resolution of the members of the House of Delegates, as President, I reported C.M.A.'s official position to a Senate Interim Committee regarding California's Public Assistance Medical Care Program.

As President, I spoke before the annual meeting of the California Hospital Association and outlined areas for betterment of physician-hospital-patient relationships.

To further our efforts toward better communications and a better understanding of all C.M.A. affairs the Council, during the past year, has scheduled its meetings in areas other than metropolitan San Francisco and Los Angeles. Once initiated, I hope this program will be continued.

Respectfully submitted,

FRANCIS E. WEST, *President*

REPORT OF THE PRESIDENT-ELECT

To the President and the House of Delegates:

I have had a very interesting and informative experience by visiting a good many of the northern county societies and discussing with the members many of the problems affecting organized medicine. We have tried to stress the general changes which are affecting the economy of private medical practice at the present time as well as the overall public relations approach of medicine in reacting to this situation. Several meetings have been held with woman's auxiliaries on the same day that the meeting was held with the medical society and with these groups the discussion has usually centered around the general implications of the problems of an aging population as they properly affect medicine. The response on the part of both physicians and auxiliary members has been very gratifying.

Respectfully submitted,

T. ERIC REYNOLDS, *President-Elect*

REPORT OF THE SPEAKER AND VICE-SPEAKER OF THE HOUSE OF DELEGATES

To the President and the House of Delegates:

Your Speaker and Vice-Speaker are deeply grateful for the opportunity to serve the House of Delegates and the California Medical Association. We have attended all meetings of the Council throughout the year. We have also attended numerous other committee meetings on an ex officio basis.

It is difficult at this time to anticipate the number of resolutions to be presented at the forthcoming House of Delegates Meeting. However, from comments and discussions we have heard, it is felt that there will be a sufficient number of resolutions pertaining to old age assistance, to warrant the reactivation of Reference Committee No. 3A. The same committee will serve you, namely: Robb Smith, Orange Cove; Robert C. Combs, San Francisco, and William F. Quinn, Los Angeles.

The Council has also recommended that the Constitution Study Committee which functioned so ably last year, and again this year, be continued. This committee will have a report to give before the House of Delegates. The committee is composed of: Sam McClendon, chairman, San Diego; Robb Smith, Orange Cove; C. J. Attwood, Oakland; Matthew Hosmer, San Francisco; Carl Hadley, San Bernardino; James Moore, Ventura; Fred Olson, Fortuna; James Yant, Sacramento; Jay J. Crane, Los Angeles; Leslie Magoon, San Jose.

Should the number of resolutions warrant, Committee No. 3B may be reactivated to carry the additional volume of work.

Your Speaker and Vice-Speaker are appreciative of the many kind remarks and notes relative to the smooth functioning of the House of Delegates last year and the innovations introduced. We sincerely hope to continue improvements which expedite the conduct of the House of Delegates. In this vein we would be grateful for any suggestions toward this accomplishment.

Our sincere appreciation is again extended to the chairmen and members of all committees for their devotion and hard work during the 1958 session.

Respectfully submitted,

JAMES C. DOYLE, *Speaker*
IVAN C. HERON, *Vice-Speaker*

REPORT OF THE PRESIDENT OF THE TRUSTEES OF THE C.M.A.

To the House of Delegates:

The Trustees of the California Medical Association is a California nonprofit corporation organized some years ago to serve as a holding company for accumulated surplus funds of the Association. The members of the corporation are at all times the members of the Council of the Association and the board of directors is selected from the Council membership. Traditionally the president of the C.M.A. serves as president of the corporation.

During the past year the members of the corporation met to elect a board of directors and to review the activities of the organization during the preceding year. The board of directors has met on several occasions to transact necessary business.

Elsewhere in this issue appear the balance sheet and the statement of income and expenditures of the corporation for the fiscal year ended June 30, 1958. These reports are self-explanatory.

One aspect of the operations of the Trustees is the purchase and retention of life insurance policies on key C.M.A. employees. It is sad to report that during the past year one employee, Herbert C. Dady, died; the directors of the cor-

poration have provided that the proceeds on insurance policies carried on his life shall be paid as monthly annuity payments to his widow during her lifetime..

During the coming year the Trustees will take title to real estate located at 693 Sutter Street, San Francisco, which will then serve as office headquarters for the C.M.A. This will require some financing, which the board of directors, with the approval of the Council, will arrange.

Members reviewing the financial report of the corporation will note that $9,000 in capital stock of Pacific Magnetic Tape Equipment Co. has been acquired since the previous financial report. This company has been organized as a separate operation of Audio-Digest Foundation, in the business of selling tape equipment as contrasted to the service sales of Audio-Digest. Proceeds of the sale of this capital stock were used by the company to repay a loan of the same amount made by the C.M.A. to Audio-Digest at the inception of that company.

The Trustees have also accepted their appointment by Audio-Digest Foundation as trustees under insurance policies carried by the foundation on key employees.

Respectfully submitted,

FRANCIS E. WEST, *President*

REPORT OF THE PHYSICIANS' BENEVOLENCE FUND, INC.

To the House of Delegates:

Physicians' Benevolence Fund, Inc., is a California nonprofit corporation which provides funds to assist physicians and their families in times of financial stress. The corporation is the outgrowth of an activity initiated by the California Medical Association in 1940 as a committee.

It derives its income from a contribution of $1 per active member of the C.M.A. each year, from contributions made by the Woman's Auxiliary to the C.M.A. and from miscellaneous contributions, some made in the memory of deceased physicians or their family members. In addition, income is received from government obligations in which the corporation invests its surplus funds.

On another page of this issue, along with other financial reports, appears the balance sheet and the operating statement of the fund for the fiscal year ended June 30, 1958. The income shown totaled $23,380.82, of which $15,418.25 came from C.M.A. contributions, $6,106.58 from the Woman's Auxiliary and $1,855.99 from interest on investments.

Expenditures for the year totaled $12,842.29, all but $392.29 of which was spent as benevolences to needy physicians and their families. This left a surplus for the year of $10,538.53, which was added to the surplus account, bringing it to $110,528.56 at the close of the fiscal year.

During the past year the operating committee appointed by the C.M.A. Council to manage this fund has met and adopted standards under which benevolence payments are authorized and made. These call for cooperation by county medical societies, furnishing of medical statements in cases of illness and a scale of benefits more generous than those used in the past.

Benevolences paid by the fund in the past year have included sums to assist the Los Angeles County Physicians' Aid Association and individual help to disabled or needy physicians and their families. During the year two physicians who had received help from the fund recovered from illnesses or injuries and voluntarily removed themselves from further assistance. It is always gratifying when this occurs, especially to see the physician regain his physical strength and renew his professional activities.

During the past year the operating committee has been most prompt and fair in meeting requests for assistance. The county societies, likewise, have been most cooperative in handling needy cases with finesse and in reporting to the fund on the progress in individual cases of illness or injury.

To Doctor Ford P. Cady of Los Angeles, chairman, and Doctors Elizabeth Mason-Hohl of Los Angeles, Don C. Musser of San Francisco, C. L. Boice of San Jose and George G. Wolf of Fresno, members of the operating committee, we all owe thanks. They have at all times carried out their duties in splendid fashion.

It is sad to report that Doctor Axcel E. Anderson of Fresno, who had been chairman of this committee for 18 years, died during the year. His death means a great loss but his enthusiasm for this benevolent activity has carried through to the other members of the committee and we can confidently look forward to a friendly, sympathetic and understanding administration from the present committee members.

Respectfully submitted,

FRANCIS E. WEST, *President*

REPORT OF THE SECRETARY

To the President and the House of Delegates:

This report will be unusually brief because the Secretary has been unable to fulfill the essential duties of the office since August 1958.

The demands upon the time of the Secretary have increased and it is with regret that his resignation had to be handed to the Council. The role of the Secretary can be of great value to the Council because of the fact that he ordinarily serves for a number of years. This Secretary has completed eight years and finds that there are only three others on the Council who were there at the time he was appointed.

This continuity is important to the Association and to the Council, but it is essential that the Secretary have sufficient time to attend all necessary meetings, so as to make him of greatest possible value.

In the meantime, the Secretary has continued to chairman the Committee on Scientific Work, which is responsible for the annual session; this report is rendered separately.

Respectfully submitted,

ALBERT C. DANIELS, *Secretary*

REPORT OF THE EDITOR

To the President and the House of Delegates:

Owing to the earliness of the Annual Session in 1959, this report had to be prepared before the end of the calendar year 1958. Hence comparisons as to the number of pages printed and the numbers of the manuscripts published cannot equitably be made with data of preceding years. For the first nine months of 1958, however, CALIFORNIA MEDICINE operated at about the levels of the corresponding period in the previous year. The number of the articles published in the first three quarters of the year just ended was 120 against 118 in the comparable period of 1957. There was a moderate increase in the number of text pages—711 against 644—owing in large part to a rather fuller reporting of the House of Delegates proceedings in 1958.

During the year a survey of CALIFORNIA MEDICINE's subscribers, by a questionnaire sent to ten per cent of the Association's members, was carried out to learn their attitude toward the official journal, and what might be done to make it serve them better. A report of the results is made on the editorial page of this issue.

The fact that the next Annual Session is scheduled two months earlier than the 1958 meeting put somewhat heavier than usual pressure on members of the Editorial Board, in

that there was less time to deal with 1958 Annual Session manuscripts that had to be reviewed, decided upon and prepared for publication, before the new crop comes on. They did the task smoothly and well.

A new member was appointed to the board during the year—Dr. George V. Webster, of Pasadena, to the Plastic Surgery section succeeding Dr. William S. Kiskadden, Los Angeles, who resigned.

It is a pleasure to acknowledge the valuable help constantly given by members of the Editorial Board and to thank them for it. The journal being a product of cooperative effort, the editor here acknowledges and expresses his gratitude for the willing and able services of many others who have been called upon now and again for special tasks —for book reviews, for the preparation of special material, for advice in special circumstances. Your journal is the better for their help.

Thanks are due again to the very loyal members of the editorial staff in the central office—Bob Edwards, who makes California Medicine really "go" and Mrs. Barbara Rooney, who so successfully keeps track of countless important details. Thanks, too, to John Hunton, who has contributed many excellent editorials.

Respectfully submitted,

Dwight L. Wilbur, *Editor*

REPORT OF THE EXECUTIVE SECRETARY

To the President and the House of Delegates:

Your Executive Secretary will again present his report in sections, each designed to cover a significant aspect of his duties. This report will present highlights only but additional details will be available through the reference committee in the House of Delegates.

1. *Administration.* Office headquarters remain at 450 Sutter Street, San Francisco, where provision has been made for office space for the medical director of the Cancer Commission and his secretary but where, otherwise, the Association is working in extremely cramped quarters. At this writing the entire staff is looking forward to the day when the Association will move to the 693 Sutter Street building which the Trustees of the C.M.A. have arranged to purchase.

The new building will require a modest amount of remodeling work before the offices can be moved. Most important will be the installation of a new elevator, to replace an antiquated elevator now in use and to bring that part of the building into conformity with the more modern appearance of the rest of the structure.

It is hoped to be able to move in the fall of 1959 but the actual date must await the completion of a new building and a move into it by the present owners of 693 Sutter Street.

2. *Personnel.* The headquarters office now houses eight male and 15 female full-time employees and one male and one female part-time employees. During the past year an office manager was employed; he has taken over a number of administrative functions and has freed others to carry on other duties. A part-time office boy has also been employed to handle outgoing mail, run reproducing machines and in general attend to housekeeping chores. A part-time clerk has also been secured to help handle the editorial matter for the journal.

Mention was made in this report last year of the need for an increased staff to handle the Association's work under an ever-enlarging program of activities. This need has been further emphasized in the past year, when a special division has been created to handle the work of all commissions and committees. The Council and House of Delegates have created a dynamic program which can well be carried out administratively if provision is made for the needed personnel.

The Los Angeles office still consists of the director of public relations, the director of postgraduate activities and their respective secretaries.

It is anticipated that further increases in personnel will be required in the coming year, when more space will be available in the new quarters.

3. *Equipment.* All office machinery has been maintained in top condition and replacements made on outworn or obsolete machines. During the past year a postage meter has been installed as a means of eliminating a lot of hand work and expediting the mailing of a greatly increased volume of reports, notices of meetings and general mailings.

4. *Membership.* As of November 1, 1958, the date on which an official count of membership is taken to determine the county societies' representation in the House of Delegates, the Association showed 15,766 active, dues-paid members. This was an increase of 636 members over the preceding year. In accordance with the requirements of the By-Laws, membership by county societies, as of November 1, 1958, and a year earlier, is listed below:

Active Membership in the C.M.A. by County Societies

	Nov. 1 1957	*Nov. 1 1958*	*Net Gain —Loss*
Alameda-Contra Costa	1,340	1,381	41
Butte-Glenn	83	84	1
Fresno	270	276	6
Humboldt	80	80	
Imperial	51	51	
Inyo-Mono	11	10	—1
Kern	189	206	17
Kings	32	36	4
Lassen-Plumas-Modoc	22	24	2
Los Angeles	6,380	6,621	241
Madera	14	15	1
Marin	165	179	14
Mendocino-Lake	51	59	8
Merced	51	53	2
Monterey	166	176	10
Napa	84	85	1
Orange	420	478	58
Placer-Nevada-Sierra	62	65	3
Riverside	194	208	14
Sacramento	383	397	14
San Benito	12	10	—2
San Bernardino	326	340	14
San Diego	753	811	58
San Francisco	1,620	1,636	16
San Joaquin	194	208	14
San Luis Obispo	70	79	9
San Mateo	452	466	14
Santa Barbara	191	199	8
Santa Clara	615	647	32
Santa Cruz	83	90	7
Shasta-Trinity	50	58	8
Siskiyou	20	23	3
Solano	74	73	—1
Sonoma	151	165	14
Stanislaus	149	145	—4
Tehama	13	14	1
Tulare	109	109	
Ventura	108	115	7
Yolo	42	43	1
Yuba-Sutter-Colusa	50	51	1
Total	15,130	15,766	636

5. *Financial.* A complete financial report, including both balance sheet as of June 30, 1958, and an operating statement for the fiscal year ended on that date appear herewith as a part of this report. These reports are accompanied by similar statements covering Trustees of the California Medical Association and Physicians' Benevolence Fund, Inc., corporate subsidiaries of the Association which come under the financial management of your executive secretary.

CALIFORNIA MEDICAL ASSOCIATION

EXHIBIT A

BALANCE SHEET, JUNE 30, 1958

ASSETS

CASH		$ 29,545.97
ACCOUNTS RECEIVABLE		18,234.04
LOANS RECEIVABLE	$229,543.50	
Less reserve	229,543.50	
Remainder		
INVESTMENT IN U. S. TREASURY SECURITIES (at cost)		349,227.50
FURNITURE AND FIXTURES (at nominal value)		1.00
DEFERRED CHARGES		3,438.77
DEPOSITS		1,824.30
TOTAL		$402,271.58

LIABILITIES

ACCOUNTS PAYABLE		$ 16,186.87
ACCRUED EXPENSES:		
General:		
Expenses of the American Medical Association Convention	$ 13,020.95	
Organization expenses	8,637.54	
Committees' and sundry	7,254.95	
Payroll taxes	517.04	
Total	$ 29,430.48	
American Medical Education Foundation	150,559.00	
Total		179,989.48
DEFERRED INCOME—PREPAID ADVERTISING		459.15
SURPLUS, EXHIBIT B		205,636.08
TOTAL		$402,271.58

EXHIBIT B

STATEMENT OF INCOME AND SURPLUS FOR THE YEARS ENDED JUNE 30, 1958 AND 1957, AND COMPARISON

	Year Ended June 30		Increase
	1958	1957	*Decrease*
INCOME:			
DUES AND GENERAL:			
Membership dues, less portion allocated to CALIFORNIA MEDICINE subscription	$ 704,887.74	$670,154.18	$ 34,733.56
Exhibitors at annual meeting	33,360.00	28,860.00	4,500.00
Postgraduate institute	17,505.00	19,240.00	*1,735.00*
Fee for collection of American Medical Association dues	3,825.87	3,645.25	180.62
Interest earned	5,729.97	3,336.61	2,393.36
Other	511.61	86.27	425.34
TOTAL	$ 765,820.19	$725,322.31	$ 40,497.88
OFFICIAL JOURNAL—CALIFORNIA MEDICINE:			
Advertising	$ 189,634.60	$174,468.29	$ 15,166.31
Members' subscriptions allocated from dues	49,563.00	47,382.00	2,181.00
Other subscriptions	2,384.78	2,243.31	141.47
Reprints (net)	720.86	574.52	146.34
TOTAL	$ 242,303.24	$224,668.12	$ 17,635.12
TOTAL INCOME	$1,008,123.43	$949,990.43	$ 58,133.00
EXPENDITURES (Schedule 1):			
Administration	$ 284,389.24	$216,209.41	$ 68,179.83
Scientific, educational, and public relations	552,140.71	477,664.46	74,476.25
TOTAL	$ 836,529.95	$693,873.87	$142,656.08
OFFICIAL JOURNAL—CALIFORNIA MEDICINE	211,995.94	197,702.53	14,293.41
TOTAL EXPENDITURES	$1,048,525.89	$891,576.40	$156,949.49
REMAINDER	*$ 40,402.46*	$ 58,414.03	*$ 98,816.49*
SURPLUS CREDITS:			
Reduction in reserve for loans outstanding at June 30, 1957	45,534.00		
Other credits applicable to prior periods	454.28		
TOTAL	$ 5,585.82		
SURPLUS CHARGES:			
Expenses applicable to prior periods	$ 1,402.63		
Reserves provided for loans during the year ended June 30, 1958	66,300.00		
TOTAL	$ 67,702.63		
DECREASE IN SURPLUS FOR THE YEAR	$ 62,116.81		
SURPLUS, JULY 1, 1957	267,752.89		
SURPLUS, JUNE 30, 1958	$ 205,636.08		

CALIFORNIA MEDICAL ASSOCIATION

EXHIBIT B—SCHEDULE 1

STATEMENT OF EXPENDITURES FOR THE YEARS ENDED JUNE 30, 1958 AND 1957, AND COMPARISON

	Year Ended June 30		Increase
	1958	1957	*Decrease*
ADMINISTRATION:			
Salaries:			
Administrative	$ 38,703.34	$ 35,213.36	$ 3,489.98
Clerical	33,642.82	29,769.42	3,873.40
Total	$ 72,346.16	$ 64,982.78	$ 7,363.38
Traveling:			
Officers	$ 3,282.30	$ 1,813.71	$ 1,468.59
Council and Executive Committee	19,797.19	13,243.38	6,553.81
Total	$ 23,079.49	$ 15,057.09	$ 8,022.40
Annual meeting expenses, including transportation	$ 40,201.92	$ 31,741.12	$ 8,460.80
American Medical Association Convention—Delegates' traveling and sundry meeting expenses	$ 31,446.45	$ 25,230.06	$ 6,216.39
Council and Executive Committee expenses	$ 7,196.40	$ 3,635.93	$ 3,560.47
County Secretaries' Conference	$ 4,026.13	$ 3,312.69	$ 713.44
Los Angeles office expenses	$ 4,475.55	$ 3,045.79	$ 1,429.76
Legal and organization expense:			
Legal expense	$ 19,023.83	$ 21,095.33	*$ 2,071.50*
Organization expense	476.20		476.20
Total	$ 19,500.03	$ 21,095.33	*$ 1,595.30*
Office expenses:			
Office rent	$ 9,991.56	$ 9,991.56	
Telephone and telegraph	5,514.90	4,671.77	$ 843.13
Supplies and expense	15,850.12	11,617.85	4,232.27
Postage	2,169.46	1,550.03	619.43
Total	$ 33,526.04	$ 27,831.21	$ 5,694.83
Other expenses:			
Equipment purchases and expense	$ 6,455.35	$ 2,812.59	$ 3,642.76
Payroll taxes	3,003.47	2,816.20	187.27
Pensions	480.00	480.00	
The Woman's Auxiliary to the California Medical Association	8,914.47	6,348.68	2,565.79
Student assistance—American Medical Association meetings	3,684.12	7,112.86	*3,428.74*
Professional fees for survey of Association's operational structure	25,522.33		25,522.33
Miscellaneous	531.33	707.08	*175.75*
Total	$ 48,591.07	$ 20,277.41	$ 28,313.66
TOTAL	$ 284,389.24	$216,209.41	$ 68,179.83
SCIENTIFIC, EDUCATION, AND PUBLIC RELATIONS:			
Medical Services	$ 40,204.27	$ 22,657.22	$ 17,547.05
Public Health and Public Agencies	15,332.83	10,001.23	5,331.60
Public Policy	119,846.67	128,041.64	*8,194.97*
Medical Education	52,527.95	46,999.17	5,528.78
Cancer Commission	32,143.98	32,180.25	*36.27*
Professional Welfare	95,492.87	54,175.40	41,317.47
Special Committees:			
Scientific Work	4,025.79	3,230.19	795.60
Medical Executives Conference	6,521.33	3,912.81	2,608.52
Committee on The Private Practice of Medicine		1,974.29	*1,974.29*
Constitution Study Committee	1,840.39		1,840.39
Advertising Committee	1,463.50	1,542.53	*79.03*
Others	2,525.05	1,513.85	1,011.20
Contributions:			
American Medical Educational Foundation	150,559.00	143,043.25	7,515.75
Physicians' Benevolence Fund	15,418.25	14,947.75	470.50
Medical Libraries	7,709.12	7,473.88	235.24
Nursing League	3,000.00	3,000.00	
Other	3,529.71	2,971.00	558.71
TOTAL	$ 552,140.71	$477,664.46	$ 74,476.25
OFFICIAL JOURNAL—CALIFORNIA MEDICINE:			
Printing	$ 143,834.22	$136,458.50	$ 7,375.72
Advertising sales expense	20,384.00	18,129.65	2,254.35
Salaries	24,515.17	23,209.34	1,305.83
Rent	3,458.80	3,330.60	128.20
Telephone and telegraph	2,201.87	1,862.23	339.64
Postage and mailing	6,988.43	6,078.72	909.71
Addressograph	2,642.77	2,455.54	187.23
Illustrations	2,832.56	2,340.23	492.33
Advertising discounts and collection expense	3,541.00	3,022.15	518.85
Sundry	1,597.12	815.57	781.55
TOTAL	$ 211,995.94	$197,702.53	$ 14,293.41
TOTAL	$1,048,525.89	$891,576.40	$156,949.49

TRUSTEES OF THE CALIFORNIA MEDICAL ASSOCIATION

(A Nonprofit Corporation Incorporated Under the Laws of California)

EXHIBIT A

BALANCE SHEET, JUNE 30, 1958

ASSETS

CASH			$ 37,454.73
U. S. TREASURY BONDS (at maturity value)			1,121,000.00
CAPITAL STOCK OF PACIFIC MAGNETIC TAPE EQUIPMENT CO.			9,000.00
TRUST FUND FOR CALIFORNIA MEDICAL ASSOCIATION EMPLOYEES			74,349.34
DEPOSIT ON PURCHASE OF REAL ESTATE AT 693 SUTTER STREET, SAN FRANCISCO			26,125.67
PREPAID INSURANCE			203.80
TOTAL			$1,268,133.54

LIABILITIES

TRUST FUNDS			$ 114,418.98
EXCESS OF ASSETS OVER LIABILITIES:			
Contributed assets		$882,915.99	
Excess of income over expenditures:			
Balance, June 30, 1957	$261,402.08		
Year ended June 30, 1958 (Exhibit B)	9,396.49	270,798.57	
TOTAL			1,153,714.56
TOTAL			$1,268,133.54

EXHIBIT B

STATEMENT OF INCOME AND EXPENDITURES FOR THE YEAR ENDED JUNE 30, 1958

INCOME:			
Interest on bonds			$28,025.00
Interest—Other			759.00
TOTAL			$28,784.00
EXPENDITURES:			
Audit fee		$ 793.50	
Custodian fee		290.57	
Miscellaneous		891.34	
TOTAL			1,975.41
BALANCE			$26,808.59
ADD EXCESS OF MATURITY VALUE OVER COST OF U. S. TREASURY BILLS PURCHASED DURING THE YEAR, CHARGED TO THE INVESTMENT ACCOUNT TO REFLECT THE TREASURY BILLS AT MATURITY VALUE			474.90
TOTAL			$27,283.49
OTHER CHARGES:			
Net premium on life and retirement insurance policies		$14,887.00	
Provision for the retirement or other benefit of an employee of an affiliated organization		3,000.00	17,887.00
EXCESS OF INCOME OVER EXPENDITURES			$ 9,396.49

PHYSICIANS' BENEVOLENCE FUND, INC.

(A Nonprofit Corporation Incorporated Under the Laws of California)

EXHIBIT A

BALANCE SHEET, JUNE 30, 1958

ASSETS

CASH			$ 66,528.56
INVESTMENTS, U. S. TREASURY BONDS (at maturity value)			44,000.00
TOTAL			$110,528.56

LIABILITIES

EXCESS OF ASSETS OVER LIABILITIES:			
Contributed assets		$92,132.28	
Excess of income over expenditures:			
Balance, June 30, 1957	$ 7,857.75		
Year ended June 30, 1958 (Exhibit B)	10,538.53	18,396.28	
TOTAL			$110,528.56

EXHIBIT B

STATEMENT OF INCOME AND EXPENDITURES FOR THE YEAR ENDED JUNE 30, 1958

INCOME:			
Contributions received:			
California Medical Association		$15,418.25	
Woman's Auxiliary to the California Medical Association		6,106.58	$21,524.83
Interest received: U. S. Treasury securities			1,855.99
TOTAL			$23,380.82
EXPENDITURES:			
Payments to beneficiaries		$12,450.00	
Other		392.29	
TOTAL			12,842.29
EXCESS OF INCOME OVER EXPENDITURES			$10,538.53

For the fiscal year ended June 30, 1958, the Association showed a net deficit of $40,402, compared with a net surplus for the preceding year of $58,414. Total income for the year was more than for the preceding fiscal year but the increase in expenses more than offset this gain.

Income from membership dues and from annual session exhibits showed increases from the previous year, while income from postgraduate institutes was slightly lower. Income from California Medicine was also higher, both from advertising revenues and other sources. Total income for the fiscal period was $1,008,123, up $58,133 from the previous year and the first time the Association's annual income has exceeded the million-dollar mark.

On the other hand, expenses in practically all departments of the Association's work showed increases over the 1957 fiscal year. Expenditures were lower for legal costs, public policy, Student A.M.A. and two committee activities; other than in these categories, expenditures in all other items were higher than in the preceding fiscal year.

California Medicine showed a net surplus for the year of $30,307, compared with a net surplus of $26,965 for the previous period. Increased revenues from advertising sales were partially offset by higher production, mailing and postage costs encountered during the year.

6. California Medicine. The journal enjoyed another year of high standing among state and regional medical publications. A recent visit to the leading advertising agencies in Chicago and New York by your executive secretary and the advertising manager of the journal elicited many unsolicited complimentary remarks, all indicative of high esteem for California Medicine. A survey of readers taken during the year also indicated a high degree of reader interest.

Mechanically, the problems of publishing a journal this size are mounting from year to year. Advertisers contribute greatly to these problems with orders for the binding of inserts, use of heavy paper stocks, use of folded inserts and use of many color pages. To date we have been able to handle all such orders, due primarily to the high quality work and cooperative attitude of our printers. On top of these mechanical problems, the circulation keeps increasing as C.M.A. membership grows; in the next year the advertising rates will again be increased to reflect the added circulation.

During the year Mr. Herbert Dady, advertising manager of California Medicine for 11 years, died suddenly while in New York on C.M.A. business. His office has been filled by Mr. Melvin B. Tyler, who has shown an immediate aptitude for this work and who indicates great promise as an advertising representative and director. The Trustees of the California Medical Association, who held an insurance policy on the life of Mr. Dady, very generously voted that the proceeds of this policy should be paid to his widow during the remainder of her lifetime.

7. *Commissions and Committees.* Following the 1958 Annual Session Mr. Robert Thomas was installed as director of all commission and committee activities. This centralization was indicated by the intensified activities for all these groups voted by the House of Delegates and the Council. Mr. Thomas has proved eminently capable of handling the many activities assigned to him but it is becoming increasingly obvious that he will need assistance in this field. As many as six or seven commission or committee meetings may be scheduled over a single week-end and the assignment of qualified staff personnel to handle so many sessions presents an immediate and knotty problem. Plans are now in preparation for an increase in staff to meet the many demands placed on the office by the many active commissions and committees in the Association.

It is also worthy of note that the scheduling of Council meetings at monthly intervals has added greatly to the work of the office. Time and care are required in the planning of Council meetings and their agenda, in the preparation and checking of minutes and in carrying out the decisions reached at these meetings.

8. *Public Relations.* Your executive secretary has continued to work closely with the public relations staff members. Again this year, as in the past, a great deal of work in this department has been in direct assistance to the county societies on problems of a local character. In addition, the department has provided pamphlets, leaflets and other aids for the use of members who request them. A full report on these activities appears on another page in this issue.

On November 1, Mr. Glenn Gillette, northern California member of the public relations team, resigned in order to accept a new position with the American Medical Association. His place has been filled by Mr. Robert Marvin, who has served as executive secretary of the Riverside County Medical Association for the past four years.

9. *Research and Planning.* During the year the Council studied at great length a proposal to inaugurate a department of research and planning within the Association. The tentative plan approved at this time calls for the establishment of a committee of outstanding members, together with lay members, and the employment, initially, of a research director who could explore avenues of potential research, recommend methods to be employed and secure the services of outside research experts. At present plans are being laid for this approach and inquiries being made as a preliminary step in securing a research director. When the Association is able to occupy its new offices, space will be available for this type of department.

10. *Annual Session.* Plans are now nearing completion for the 1959 Annual Session. The program will include, in addition to the general and section meetings, a series of postgraduate courses and one meeting which will be held in an atomic energy electrical plant. A record number of technical exhibitors will participate in the meeting and ample space will be available for a large number of scientific exhibits. Meetings of the House of Delegates will be held in the Sheraton-Palace Hotel, San Francisco, and all scientific meetings, together with exhibits, will be staged in the San Francisco Civic Auditorium.

Following the 1958 Annual Session, an evaluation of the technical exhibits—sometimes referred to as commercial or industrial exhibits—was received from the Medical Exhibitors Association. This is a national organization of firms which regularly use technical exhibits at medical meetings as a part of their merchandising programs. The report on the C.M.A. 1958 meeting gave the Association a very high rating in the opinions of the exhibitors.

11. *General.* The California Medical Association has for some years been the second largest state medical association and its consistent rate of growth continues to narrow the gap between the first and second places. In the A.M.A. House of Delegates, California now has 16 Delegates, only one less than New York. The numerical increase in membership is, year after year, higher in California than in any other state.

Along with this steady increase in size has come a demand from medical leaders for a more aggressive approach to the many political, social and philosophical problems confronting the profession of medicine and influencing the manner in which medicine is practiced. As government continues to nibble off additional segments of the population as its wards for the provision of medical care, the profession must be ready to adjust to the laws of the land and to provide care for those in need of it while, simultaneously, protecting the principles under which the profession has made such

enormous scientific strides in recent years. The impact of prepaid plans, of labor unions and others likewise point to the need for careful study and planning as a means of adjusting to changed economic conditions.

The staff of your organization is aware of these needs and is prepared to augment and adjust its procedures in line with the policy decisions which the elected officials make. In this connection it should be pointed out that all increases in activity will require increased staff and increased income. Present space limitations have worked against staff increases but in the new quarters to be occupied in 1959 it will be possible to provide for the needs of a staff of sufficient size to handle the necessary projects.

The new quarters will also require some remodeling and refurbishing. It is the aim of your staff to provide the Association with headquarters which will be adequate for its needs, of a quality befitting the prestige of the profession and arranged and operated as economically as possible.

The budget for 1959-1960, on which the 1960 dues will be based, will reflect the provisions made for handling the augmented program of the C.M.A. The attention of the members of the House of Delegates is particularly invited to these considerations when the budget is examined.

12. *Conclusion.* In conclusion, may I thank all of the officers, councilors, commission and committee members and many others who have contributed so much to the operations of the C.M.A. in the past year. The small minority of the membership who volunteer their time and talents to work for the betterment of the profession as a whole are due the thanks of the entire membership. Thanks are also due in profusion to the loyal and efficient staff members who comprise your employees. Their tireless efforts make it possible to handle your work in your interest.

Respectfully submitted,

JOHN HUNTON, *Executive Secretary*

REPORT OF LEGAL DEPARTMENT

To the President and the House of Delegates:

The Legal Department submits the following report covering the interval between the 1958 annual session and the time of the submission of this report.

During the past year we have attended all meetings of the House of Delegates, the Council, and the meetings of the various commissions, standing committees, and special committees of the association; and we have also prepared and submitted opinions on a number of subjects, as requested by the association, its officers and committees as well as its members and its component societies.

1. *Medical Society Membership.*

In May, 1958 the District Court of Appeal, Second District, Division Two, rendered a decision which has a most important impact on medical societies. The facts of the case briefly are as follows:

Plaintiff alleges in his complaint that he is a licensed doctor of medicine authorized to practice in the State of California and on September 21, 1954 he was notified that his application for membership in the Los Angeles County Medical Association had been refused. He now claims as a result of that action by the medical association he has suffered damages and alleges that the defendants conspired and combined to dominate and control the practice of medicine in Los Angeles. He named as defendants the Los Angeles County Medical Association together with the American Medical Association.

In pursuing his complaint a *subpoena duces tecum* was issued to the Secretary-Treasurer of the Los Angeles County Medical Association requiring him to appear for a deposition and to produce all of the letters written by any member of the Los Angeles County Medical Association or the Yakima County Medical Association regarding the plaintiff. The plaintiff also asked that any investigation reports regarding his professional, personal, ethical or moral background be produced as well as all other books, records, papers, documents and files of every type or nature in connection with his membership in the Los Angeles County Medical Association.

The Secretary-Treasurer on advice of counsel refused to answer any of the questions put to him concerning the request in the subpoena regarding any letters, etc. The matter was submitted to the Superior Court and the Superior Court upheld the objections of the Secretary-Treasurer in not producing all of these records and answering the questions. An appeal was taken to the District Court of Appeal through a proceeding in mandamus.

In May, 1958 the District Court of Appeal handed down its decision reversing the decision of the Superior Court.

The decision points out that the new rules of discovery which were effective January 1, 1958 relax the rules which relate to the taking of evidence by ancillary proceedings. The Court points out that the basic issue presented by the pleadings is the existence or nonexistence of a combination by the named defendants to restrain competition by the plaintiff. The question directly presented to the Court was whether the plaintiff has stated a cause of action for restraint of trade under both the common law principles and the Cartwright Act. The Court points out that this has never been directly decided by the Courts of the State of California but that certain cases from other jurisdictions construing the Federal Anti-Trust Laws and analogous state statutes may be considered.

The Court then reviews all of the cases concerning medical associations throughout the United States, including the case of *United States* vs. *American Medical Association*, 110 F 2d 703. The Court concludes that the plaintiff has sufficiently alleged a purpose on the part of the defendants to restrain competition by him and that the plaintiff does state a cause of action under the Cartwright Act as well as under common law principles. This opinion is based on the assumption that the practice of medicine in California constitutes "trade or commerce" within the meaning of the Cartwright Act. As a result of this determination, the Court holds that the questions which the defendants refused to answer are not privileged against disclosure under the law of this state and are relevant as determined by the subject matter of the action and by the potential as well as the actual issues in the case.

The case itself has not been tried as to the factual issue involved but the decision does have an important bearing on the law governing membership in a medical society.

2. *Medical Legal Relations:*

During the past year a great deal of time and effort has been devoted to the establishing of medical expert panels in the various counties in cooperation with the Bar Associations pursuant to the report of the two committees of the C.M.A. and the State Bar. This has resulted, at the present, in panels being established in San Diego, Los Angeles and San Francisco.

3. *Legislative:*

During 1958 a number of appearances were made before interim committees of the legislature including attendance at the hearings by the Senate Interim Committee on Social Welfare.

With the coming legislative session beginning January 5, 1959, a tremendous amount of work and study has gone into the preparation of legislative matters to be introduced

or supported by the C.M.A. at this legislative session. This has meant the getting together with various departments of the state in discussing proposed legislation, both by the particular agency involved as well as the C.M.A. It also includes the preparation of legislation as directed by resolutions adopted by the House of Delegates at its 1958 session. It is anticipated that this legislative session will be one of the most active the State of California has seen.

4. *Miscellaneous:*

Numerous other legal matters involving the Association have arisen during the past year. To enumerate them would unduly lengthen this report.

In addition to the writer of this report, Messrs. George A. Smith, Alan L. Bonnington, and Robert D. Huber of our firm have devoted a great deal of time and effort to the legal affairs of the Association throughout the year. Much credit is due them.

It is a pleasure to be of service to the medical profession in California.

Respectfully submitted,

PEART, BARATY & HASSARD
By HOWARD HASSARD

REPORT OF THE COMMITTEE ON EMERGENCY ACTION

To the House of Delegates:

Acting in lieu of what was formerly the Executive Committee, the Committee on Emergency Action held two meetings, as follows:

1. To confer with physicians in the Pittsburg area, and

2. To initiate the crash program to encourage additional replies to the California Medical Association's Relative Value Fee Study.

Respectfully submitted,

FRANCIS E. WEST, *Chairman*

REPORT OF THE COUNCIL

To the President and the House of Delegates:

The Council is charged with the responsibility of conducting the affairs of the Association throughout the year and, during the recess of the House of Delegates, making policies which will be followed during this interim. Along with this responsibility, the Council is granted rather broad powers under the terms of the Constitution and By-Laws.

During 1958 the Council held 14 meetings encompassing 20 days. With the dissolution of the Executive Committee by action of the 1958 House of Delegates, all policy matters now come before the Council. At times the Council confers on the Committee for Emergency Action, which includes the President, President-Elect, Speaker of the House and Council Chairman, the right to act on some matter which has been before the Council but needs additional study before action is taken.

The Council regularly acts on membership matters delegated to it by the Constitution and By-Laws; on financial reports; on reports by California Physicians' Service; on reports made by commissions and committees; on legislative matters; on legal problems; on liaison matters with the State Department of Public Health, State Department of Mental Hygiene, State Department of Social Welfare, the State Bar of California and other bodies. In addition, the Council must regularly look into the future and prepare as best it can for events which may be foreseen.

This report will cover a few of the major items which have called for the Council's time and study during 1958. Some of these items will be found in reports submitted by commissions and committees; all of them have been reported in digest form in CALIFORNIA MEDICINE, where all Council minutes are published at the earliest possible date.

Where the items covered in this report may be abbreviated or digested, all may be discussed in full before the appropriate committees of the House of Delegates; Council members will be available for such discussions.

1. *Resolutions of 1958 House of Delegates.* The 1958 House of Delegates acted on a number of resolutions, some of which were referred directly to the Council for consideration and some calling for referral or study by the Council. These are tabulated below, in concise form, subject to further discussion in the reference committees or before the House of Delegates in 1959.

Resolution No. 1. This resolution combined 20 separate resolutions presented on the subject of the Public Assistance Medical Care Act. The Council believes that the intent of the "Reject" portion of this resolution has been carried out. The "Repeal" section has been referred to the Committee on Legislation, which has reported the apparent impossibility of securing repeal by direct action; partial repeal has already been secured through amendments to the governing federal legislation. The "Rectify" part of the resolution has been followed closely, with obvious beneficial results. Further report on this is made in a later section.

Resolution No. 2. Referred to the Trustees of CPS, which is implementing the intent of the resolution.

Resolution No. 6. Referred to Committee on Fees.

Resolution No. 9. The Council has asked the county societies to make their fee review or public service committees available to third parties in disputes.

Resolution No. 14. Sections 1 to 5 referred to county societies; section 6 referred to Committee on Fees; sections 7 and 8 referred to Committee on Public Relations.

Resolution No. 23. First three sections referred to Committee on Constitution Study, which has asked additional time to study first two sections relative to representation in the Association and has ruled the third unnecessary since By-Law provisions already delegate authority to the Council. Other sections are considered already being complied with.

Resolution No. 25, with which were combined No. 30 and No. 64. Referred to special committee on research and planning, Doctor Francis E. West, chairman.

Resolution No. 27. Referred to CPS Trustees for implementation.

Resolution No. 28. Forwarded to American Medical Association and referred to Committee on Public Relations.

Resolution No. 31. Referred to Commission on Professional Welfare for study and report.

Resolution No. 32. Referred to Committee on Public Relations.

Resolution No. 42. Referred to Committee on Research and Planning.

Resolution No. 44. To be implemented through CMA office.

Resolution No. 45. Referred to Committee on Public Relations, which believes newspaper advertising funds provided by Association will meet need.

Resolution No. 46. Referred to Commission on Medical Services.

Resolution No. 48. Approved by Council.

Resolution No. 49, with which were combined No. 50 and No. 51. First section referred to Committee on Other Professions; second section deemed already being met.

Resolution No. 53. Approved by Council.

Resolution No. 58. Objectives already being met.

Resolution No. 59. Objectives already being met.

Resolution No. 62. Referred to Commission on Medical Services for study and report.

Resolution No. 63. Amended and approved. Resolution introduced into AMA House of Delegates.

Resolution No. 71. Referred to Section on Radiology, which made suggestions for implementation; these referred to Commission on Medical Services for study.

2. *Survey of Association.* The Council discussed at length

the proposals made by Robert Heller & Associates, a business management firm retained to study the structure and functioning of the Association. A special committee of Council members studied these proposals at length and the Council acted on a number of recommendations made by this committee. Some of the major decisions were: annual meetings of county society officers shall be continued; reports of meetings of the Medical Executives Conference to be given to the Council; the Executive Committee to be abolished, as subsequently voted by the House of Delegates; a Committee for Emergency Action established, to deal with items requiring immediate decision; a position of Director General to be established; the title Secretary-Treasurer to be renamed Secretary; a division of office services to be established in the office; changes in the dues structure to simplify previous requirements; centralization of all commission and committee correlation in the hands of one executive.

These and other decisions have been reported in the Council minutes. The Council believes that a stronger organization has resulted from these changes.

3. *Nominations for Appointments.* Each year the Council is called upon to name a large number of commission and committee members under the accepted system of three-year staggered appointments. The Council has deemed it advisable to consider this obligation as continuing throughout the year and has named a committee to maintain constant review and study over all commission and committee membership. This committee, in turn, has requested county society officers, Councilors and others to suggest nominees for various commissions and committees in accordance with the interests and talents of the individual named. This method of nominations appears to work well in providing the Association with strong committees in the many departments comprising the Association's programs.

4. *Blood Banking.* During 1958 the Council approved a set of standards brought in by the Committee on Blood Banks, these standards to apply to all blood banks which sought approval or sponsorship by the Association. The Council also approved the purchase of a note which had been issued by one blood bank to an individual, the note being purchased at a considerable financial saving. The Association was a guarantor on the note.

5. *Medicare.* The Council devoted considerable time to the subject of medical care for military dependents at several of its 1958 meetings. Early in the year it was voted to approve a renewal of the contract with the Department of Defense; subsequently, it was voted to approve a fee listing under which 30, 45 or 60 days of aftercare would be provided in certain cases. The Council also voted that a standard policy should be adopted in relation to fee schedule negotiations and contractual relationships involving the provision of medical care and that such standards should thereafter serve as a guide. The Council authorized a representative to appear before a subcommittee of the U. S. Senate Committee on Appropriations, to stress the belief in free choice of physicians by military dependents; later in the year the Department of Defense modified its regulations so that free choice was eliminated under specified conditions. This change was made as a means of bringing the Medicare program in line with available funds. The Council continues to follow this situation closely, especially since the contract with the Department of Defense is subject to renegotiation and re-signing annually.

6. *Public Welfare Medical Care Law.* Subsequent to the 1958 House of Delegates session the Council has worked to implement the policies voted under Resolution No. 1. As reported earlier in this report, the Council considers that certain aspects of the House of Delegates resolution have already been complied with.

A liaison committee has been maintained with the Department of Social Welfare and a cooperative working arrangement has been established and maintained. Among other things, the department agreed to a pilot study during the year on the possibility of discontinuing the need for prior authorization for treatment of welfare cases. The pilot study proved the feasibility of this move and prior authorization is now being discontinued in those areas where it may be dropped without endangering the program.

The department has also shown a willingness to consider and approve, if acceptable, pilot programs calling for a different type of payment for services rendered under the program. Three such plans have so far been advanced and one of them approved; the other two have been held in abeyance pending further study as to details and administration.

It is possible that the 1959 State Legislature will entertain legislative proposals in line with the thoughts expressed in the 1958 House of Delegates resolution. Here again, the Council will continue to follow the situation closely and to be guided by the decisions of the House of Delegates.

7. *By-Law Amendments.* The Council has prepared and will introduce into the 1959 House of Delegates, By-Law amendments to separate the office of Secretary from that of Chairman of the Committee on Scientific Work. The present Secretary finds it impossible to continue in that capacity but is willing to head up the scientific program of the Association. Since there appears no present valid reason why these two offices should be combined in the same person, the Council will propose a separation of the two obligations. The Council will also introduce a By-Law amendment to make September 1 of each year the official date on which a membership count shall be taken to determine the representation of the county societies in the House of Delegates. Such an amendment was defeated last year when it was combined with another proposed amendment which had a different purpose.

8. *Medical Review & Advisory Board.* The attention of the Council has been continuously drawn during 1958 to the studies undertaken for the Medical Review & Advisory Board on the potential areas for medical malpractice cases in the courts of the state. The board, under authorization of the House of Delegates, has been carrying on studies in the field of psychological motivation for the past two years. The findings of these studies have been given only to the members of the Council and a few selected individuals. However, during 1958 a study performed by a consulting psychologist found its way into the public press even before the Medical Review & Advisory Board had had a chance to review the findings in it.

The Council has appointed a special committtee to review the findings of this study.

The Council is interested in learning as much as possible about the causes of medical malpractice actions but is naturally concerned over the violability of confidential reports which may be made on studies which may contribute to the overall knowledge on this subject. Public officials have been promised all possible cooperation by the Association and a joint committee has been set up with the California Hospital Association for a study of this material as it affects physicians and hospitals in common.

During 1958 much progress has been made on the establishment in selected areas of panels of physician experts whose services may be made available to attorneys investigating the possibility of medical malpractice actions. Such panels have operated in Los Angeles County for several years with success and similar panels have now been estab-

lished in San Francisco and San Diego Counties and preliminary work done in Alameda County. Other counties will follow as the need indicates. This activity is being jointly undertaken with the State Bar of California.

9. *Insurance.* The Committee on Insurance has been asked during the past year to look into several forms of group insurance which have been offered for the benefit of Association members. The committee at the close of the year is analyzing bids received from several insurance carriers on specifications developed for a group program of major hospitalization insurance for C.M.A. members. If final approval is voted for the offering of this program, it is planned to make the offering only in those counties which desire it, so that there will be no competition with county societies which may already have entered into contracts for this form of coverage.

The committee during the year approved, and the Council accepted, a proposal to provide accidental death and dismemberment insurance for all commission and committee members, Officers, Councilors, key personnel and executive secretaries of county societies in the amount of $50,000 each. This program has been put into effect as a means of covering these individuals during their travels in behalf of the Association.

10. *Research and Planning.* During 1958 the Council has given much thought to the establishment within the Association of a Bureau of Research and Planning. The functions of this department would be, briefly, to examine present and potential laws and regulations, in order to consider the position of the profession under a given set of legal circumstances and to make plans accordingly. At the close of the calendar year, this proposal stands approved by the Council and plans are being made to secure the services of a trained and experienced person who may be able to review, preview and analyze social and political trends, this person to serve as a consulting staff member who will make recommendations for further studies and arrange for them. It is hoped to have this operation under way early in 1959.

11. *Public Relations.* As related earlier in this report, a number of proposals emanating from the 1958 House of Delegates have been referred by the Council to the Committee on Public Relations. This committee has been most active during 1958 and its chairman, Malcolm S. M. Watts of San Francisco, has presented a proposed program which has been accepted by the Council and has created a nationwide interest. Basically, Doctor Watts proposes that the medical profession identify itself with the personal needs and desires of the individual patient and stand as his exponent of the basic rights inherent in our citizenry. Specific suggestions for accomplishing this role accompany his proposals. The committee, on the basis of this report and other activities, appears to be actively in pursuit of specific public relations proposals which will redound to the benefit of the entire profession. The Council is continuously kept advised of the activities and proposals of this committee.

12. *Legal Department.* At each Council meeting, legal counsel advises the Council on matters of law and court decisions which have a bearing on the practice of medicine and the public health. In turn, the Council is pleased to authorize legal counsel from time to tiine to represent the Association in matters which have an inherent interest to the profession.

Among the court cases which have been brought before the Council in 1958, two stand out. One of these concerns a court decision which held that a district hospital, even though organized and operated with public funds and a public interest, had the power to decline to appoint to its medical staff a physician who was not deemed qualified for such staff appointment. The other case was on a claim for damages from a pharmaceutical producer, where the court held the producer not liable on a claim for negligence but did establish, for the first time in California legal history, a doctrine of liability because of breach of an implied warranty of the products. The Council has followed this case with great interest and has authorized legal counsel to enter a brief as *amicus curiae* in behalf of the defendant pharmaceutical producer if such action appears to be desirable.

Legal counsel will make a separate report to the House of Delegates and will doubtless cover additional legal situations of interest to the entire membership.

13. *Fee Schedules.* The Council has again devoted much time to a consideration of medical fee schedules and the limitations normally imposed on medical organizations in approving or issuing such schedules.

During 1958 the Council authorized the Committee on Fees of the Commission on Medical Services to re-evaluate the 1953-1955 Relative Value Study. At the close of 1958 this study is going on and it is hoped to have at least a progress report to make to the House of Delegates in February, 1959.

The Council has also followed with great interest a movement undertaken by various departments of the state government, which has as its ideal the establishment of a standard schedule of medical and surgical fees to apply in all cases where departments of the state purchase medical services on a fee basis. The Council has voted that in all such cases the state should pay the normal and going fee in the geographical area involved.

14. *Other Organizations.* The Council throughout the year has kept in touch with the State Department of Public Health, State Department of Mental Hygiene, California Physicians' Service and Audio-Digest Foundation. Representatives of these organizations regularly attend Council meetings, make reports and offer proposals when such are indicated. This liaison appears to be completely in the interest of the Association and valuable as a continuing contact with these important divisions of medicine within the state.

15. *California Physicians' Service.* Three members of the Council are appointed each year to sit as members of the Board of Trustees of California Physicians' Service. This liaison is most valuable and permits the Council to be kept aware at all times of the progress of CPS. Regular reports on membership and financial status are made available to the members of the Council for their information.

16. *Legislation.* With another session of the State Legislature due to convene on January 5, 1959, the Council has reviewed and voted on several matters of proposed legislation. One of these would establish the level of medical and surgical fees paid by departments of the state government at the level of the customary and going fees, with regard to geographical differences. Another would call for installation of seat belts in all new automobiles sold in the state. Another would support a move now under way by the dentists to establish the regulatory bodies of the learned professions in a separate department or as a division of the State Department of Public Health. Another would seek legal privilege for the records of obstetricians and gynecologists which might be used in compiling statistical studies in the field of maternal and neonatal morbidity and mortality.

The Committee on Legislation makes no policy decisions of its own but relies on the Council for such determinations. During the 1959 legislative session the Council expects to be in close touch with this committee at all times.

17. *General.* This report touches only on the high spots of the many items which come before the Council during

the course of a year. Officers or members of the Council will be available for the discussion of these and other matters during the 1959 House of Delegates session.

At this writing, the Council is scheduled to hold three more meetings before the Annual Session convenes. If additional items emerge from these meetings, the Council will prepare and submit to the House of Delegates a supplemental report.

Respectfully submitted,

DONALD D. LUM, *Chairman*

REPORTS OF DISTRICT COUNCILORS

FIRST COUNCILOR DISTRICT

San Diego County

To the President and the House of Delegates:

I have attended all regular meetings of the Council since the last annual meeting. The minutes of the meetings have been recorded in CALIFORNIA MEDICINE.

In addition I have served on the Committee on State Medical Services, and as chairman of the division for Community Health Services of the Commission on Public Health and Public Agencies, and of the Committee on Allied Health Agencies. For a further report on these activities, see the section on committee reports.

The year 1958 saw a rapid growth in the medical population in San Diego county—the last official figure was 811. Our 58 new members have been assimilated and no major problems have arisen in 1958.

Respectfully submitted,

JAMES C. MACLAGGAN, *Councilor, First District*

SECOND COUNCILOR DISTRICT

Imperial, Inyo, Mono, Orange, Riverside and San Bernardino Counties

To the President and the House of Delegates:

The activities of the Second Councilor District have been concentrated toward the improvement of the communications between the Council and the component societies. Monthly informal summaries have been mailed to each county officer, delegate, and alternate by the district councilor immediately following each meeting of the state council. A number of officers of the county societies composing District Two have been guests of the Council at meetings held in the southern part of the state.

I have been pleased with the results of our efforts in improving C.M.A. communications. The *Newsletters* and the *Legislative Bulletin* are well received in this district and are of inestimable value as aids in communication.

The C.M.A. sponsored secretaries and county legislative chairmen conferences are well received and accomplish a feeling of closer relationship with the corresponding state committee.

We would like consideration to be given to a conference of the county public relations chairmen with the state public relations department.

Again it has been a pleasure to serve.

Respectfully submitted,

OMER W. WHEELER, *Councilor, Second District*

THIRD COUNCILOR DISTRICT

Offices Nos. 1, 3 and 6

Los Angeles County

To the President and the House of Delegates:

"Duties of District Councilor.

"Each district Councilor shall be organizer, peacemaker and censor for his district—he shall in writing make an annual report of his work and the condition of the profession in his district to the Council which shall take such action thereon as it deem best."

We have found that Los Angeles County is becoming better organized. A new district has been formed, comprising what used to be a segment of the San Fernando District, and bounded on the north by Kern County, on the east by San Bernardino County, and on the west by Ventura County, and to the south by the San Bernardino mountains. Though this Antelope Valley District of yesterday was not large enough to rate a Councilor to its County organization, this condition will probably change shortly if local real estate promotions are even fractionally successful.

The role of peacemaker at the local (County) level, finds many sharing the same responsibilities. It is not unusual to discover what appears to be a lack of communication between: County Council and District organizations, between District and Council, or Council and District members with resultant frictions. More often than not one feels that this breakdown is due to so much communicating that the various members become immune to the "viewing with alarm" until the fear becomes a fact, that resentment and angry denunciation takes the place of past complacency. To pacify a member who feels he has been sold into economic bondage by our governmental representatives is difficult when the "peacemaker" is as much victimized as the complainer.

The role of censor is, we believe, archaic and certainly undemocratic. Though no organization should be free of censorship, we find little to criticize or censor in this County's activities this past year.

This space should be used to transmit information on County activities that other Counties may be more adequately informed of our progress and our failures.

The establishment of a panel of plaintiffs' consultants in threatened malpractice suits has been successful enough to have stimulated similar measures in other Counties.

We are of the opinion that the successful operation of private enterprise prepayment plans is our best argument against government entering into this field. To this end we have tried to set up criteria for the insurance industry, establishing conditions for our cooperation, wherein the ethical behavior of both physician and insurance company is restated and in conformity with which certain automatic settlements may be accomplished.

Adoption of a TV, Radio and Press Code which is a further delineation of the principles of medical ethics as applicable to the above communications media. This code answers oft asked questions on what is ethical and what is not, and how best to cooperate with representatives of the above public information media in protecting the general public against misinformation or wrongly slanted information.

The Los Angeles County Medical Association, like similar organizations, feels its responsibility in furthering research and dissemination of information, not only in the fields of clinical medicine, but in socio-economic fields as well. To this end, the Los Angeles County Medical Association endorses the plan for establishment of such a research service at a State level.

The County organization, of course, would not wish to set up research projects that would parallel that contem-

plated at the State or national level, which two must judge what priority to give to such research as compared for example with dues dollars given to private medical schools. Obviously, Los Angeles County would have to be a part of almost any such research activity.

The Los Angeles County Medical Association also approved an inter-professional code which should help to improve relations with the legal profession. It has set up criteria for program approval, endorsement, and sponsorship for outside agencies. Los Angeles County Medical Association has also had a unique opportunity to strengthen the new Medical Examiner's-Coroner's System in Los Angeles, this year.

Respectfully submitted,

GERALD W. SHAW, *Councilor,*
Third District, Office No. 6

MALCOLM C. TODD, *Councilor,*
Third District, Office No. 1

J. NORMAN O'NEILL, *Councilor,*
Third District, Office No. 3

THIRD COUNCILOR DISTRICT—Office No. 2

Los Angeles County

To the President and the House of Delegates:

Each year the problems of the medical profession become more complex and forces of socialism appear to be gaining strength day by day. The building of more hospitals by labor union welfare plans and the willingness of some doctors to work on a salary under these plans, the forming of closed panel groups, the ever-increasing governmental intervention in the practice of medicine makes the duties of your elective representatives increasingly more difficult.

We haven't come to the point yet where we are willing to disregard the laws of the land. As time goes on and new laws are passed, which undoubtedly will be just as objectionable if not more objectionable than those that have been passed heretofore, it would appear that we have but three alternatives: One, to accept the law and to work under it; or to strike and not work under the law; or to work with the legislator in an attempt to better the objectionable features of these laws. It would appear at the present time that this is the only satisfactory method of combating this trend to socialism. In OAS, which is a good example of this, we got into the act a little late but the efforts of our liaison committee have been very effectual in bringing about the changes that we felt were objectionable.

It was with great personal satisfaction that I saw the Bureau of Economic Research and Planning established. The collection of accurate and irrefutable statistics in regard to the economics of medicine and the need or lack of need for social welfare programs will be a great step forward. At the present time neither the California Medical Association nor the labor unions nor the federal government has accurate statistics in regard to need or usage. The whole program of extending medical social benefits has been done from the political standpoint. It is my hope that the new bureau will get to work soon and that they will begin to develop the tools by which we will be able to combat this political extension of government and labor welfare plans in the practice of medicine. With accurate data at our command we would be able to sit down and study the problem thoroughly and develop a unified constructive policy that could and would be accepted by the doctors, the politicians and the public alike.

Respectfully submitted,

PAUL D. FOSTER, *Councilor,*
Third District, Office No. 2

THIRD COUNCILOR DISTRICT—Office No. 4

Los Angeles County

To the President and the House of Delegates:

As Councilor I have participated in all of the deliberations of the Council and the House of Delegates during the past year.

Specifically I have been chairman of the Commission on Professional Welfare. We have reviewed certain resolutions sent us by the House of Delegates and have resolved them.

As a committeeman I have participated in the activities of the Insurance Committee, which committee is developing a catastrophic hospital coverage program. This should be presented to the membership shortly after January 1, 1959.

As chairman of the Medical Review and Advisory Board, we have been mainly concerned with the report on hospitals and its impact. A pilot plan for member incidence of various complaints is being developed in Los Angeles County. Additional plaintiffs panels have been set up in San Diego and San Francisco counties.

I hope to give reports of our activities to the House of Delegates at the next annual session.

Respectfully submitted,

ARTHUR A. KIRCHNER, *Councilor,*
Third District, Office No. 4

THIRD COUNCILOR DISTRICT—Office No. 5

Los Angeles County

To the President and the House of Delegates:

Since the 1958 House of Delegates meeting the duties of the Councilors from the Third District have been carried out for the first time. This is a report from Office No. 5.

There has been no attempt to have each Councilor represent a certain geographical area of Los Angeles County or any of the particular District Branches of the County Medical Association. I believe that each Councilor made a good effort in contacting several of the Branches and appearing before hospital staff meetings. It may be anticipated that the intra-district organization of the six Councilors may be more detailed in the coming year by mutual agreement.

Several items of interest to the approximately 6,500 members of the C.M.A. in the Third District may be briefly listed as comments:

1. *Relative Value Study Survey.* This was a direction of the House of Delegates and was carried out to the letter. When the deadline for returns arrived on November 1, 1958, less than 30 per cent of the membership responded. The deadline was extended to December 1, 1958 and as of November 21, 1958—40 per cent had responded. As a comment the question may be asked—what kind of a message is to be taken from the response? Will the House of Delegates feel that the membership was not interested in completing such information; or, will the House feel that communication from Headquarters to the individual members was incomplete before the survey was taken?

2. Other resolutions of the 1958 House of Delegates have been only partially implemented or to date, no report. Should the 1959 House of Delegates routinely pass the same resolutions again? Some of the members in this District have made such a suggestion.

3. Action of the County Council and District organizations of a binding nature have been put into effect with many of the members then voicing strong opposition. As a result, time and effort are used to readjust the wishes of all of the members. Such a pattern is not preferred. Communication between all members and officers must be kept up to date

so that all may participate in rendering decisions on major issues. A democratic or referendum vote by an uninformed large membership has its pitfalls; while executive action or decisions by a small informed minority is not always acceptable to a large group. These comments may have a direct bearing on the future private practice of medicine.

Each District Branch of the County Medical Association of the Third District should have able and hard working medical-economic and insurance committees. Such committees will afford younger and more recent members an opportunity to immediately learn and acquaint themselves with issues and problems confronting their executive committees and headquarters officers.

Respectfully submitted,

JOSEPH P. O'CONNOR, *Councilor,*
Third District, Office No. 5

FOURTH COUNCILOR DISTRICT

San Luis Obispo, Santa Barbara and Ventura Counties

To the President and the House of Delegates:

I consider it an honor to have been selected to perform as Councilor from the Fourth District for the past six years. During this period I opposed vociferously any changes in the practice of medicine (legislative or otherwise) which I believe are detrimental to the best interest of the patient and our American way of life. Nothing should be allowed to interfere with the patient's right to a free choice of physician and a close, unhampered patient-doctor relationship.

Good public relations are fostered in the doctor's office and at the bedside of the patient. Each doctor in the practice of medicine is responsible for his share.

I have advocated the right of autonomy of each component County Medical Society.

I have voted for efficient administration of the California Medical Association and a close liaison between the component County Medical Societies, the California Medical Association and the American Medical Association. The officers and personnel of the California Medical Association are to be congratulated. They have been most loyal and diligent in carrying out their responsibilities and the duties assigned to them. In many instances, I will admit, this has been an almost impossible task as the policy of the California Medical Association is confusing at times, to me, at least.

Respectfully submitted,

ROBERT O. PEARMAN, *Councilor,*
Fourth District

FIFTH COUNCILOR DISTRICT

Calaveras, Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare and Tuolumne Counties

To the President and the House of Delegates:

The Fifth Councilor District has enjoyed a rather progressive year. The two California Medical Association sponsored blood banks in San Joaquin and Fresno counties are serving their communities well. Both banks are community-oriented, having close relationship with lay groups in their areas. Both banks are paying their obligations to the California Medical Association.

Two counties in the Fifth District served as study counties in the Department of Social Welfare test for removing prior authorization in the Old Age Security Program. This experiment was so successful that prior authorization will be removed statewide in the very near future.

Fresno County has, during the past year, organized the Fresno Foundation for Medical Care and is actively engaged in guiding the insurance programs in that area.

Respectfully submitted,

D. C. HARRINGTON, *Councilor,*
Fifth District

SIXTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Clara and Santa Cruz Counties

To the President and the House of Delegates:

Problems of communication as accentuated by last year's misunderstandings over the Public Assistance Program have been prominent in the considerations of the five counties comprising the Sixth District. Several different experiments in the dissemination of C.M.A. news through the county societies have been undertaken, each of which has had some degree of success. Further communication experiments are in progress.

On November 1 an experimental program in San Mateo County for the handling of Public Assistance patients was undertaken in which the physicians bill their usual fees. The physicians of the county agree as an organization to continue to care for these patients should the funds be completely dissipated before the year is completed.

Another experimental program in Santa Clara County has had favorable consideration, the final approval of which is pending at the time of the writing of this report. On November 4 the society voted no longer to recommend that its members not participate in the program. Discretion to participate or not to participate was left on a voluntary basis.

Several meetings have been held by the Santa Clara County Liaison Committee with officials of Stanford Medical School in an effort to achieve mutual understandings on some of the major problems in connection with the arrival of the school on the Stanford campus next year.

The C.M.A. Council has activated the 1956 suggestion of the Santa Clara County delegation that council meetings be held in the various districts by holding meetings in San Diego, Orange, and Monterey counties.

Respectfully submitted,

BURT L. DAVIS, *Councilor,*
Sixth District

SEVENTH COUNCILOR DISTRICT

San Francisco County

To the President and the House of Delegates:

As councilor from the Seventh District for the California Medical Association, I have reported regularly on the Council meetings to the San Francisco Medical Society's board of directors. I served as vice-chairman of the Council, chairman of the Heller Survey Report Committee, and on the Council's Finance Committee and Liaison Committee to the State Social Welfare Board.

The year 1958 saw even greater progress in the Society's program for young physicians. An afternoon conference in the spring, the fourth annual reception, and several evening forum-social meetings attracted hundreds of medical students, interns and residents and their spouses. Ten loans were given to house staff members and young physicians beginning practice.

A questionnaire on community health needs and resources conducted last year by the society and the United Community Fund's Health Council showed that our physicians considered mental health problems (especially alcoholism), and care and rehabilitation of the chronically ill and physically handicapped as top priority health needs. Our Mental Health Committee worked with city officials and the De-

partment of Public Health in the area of mental health and alcoholism. Our Referral Committee surveyed the membership to obtain a list of doctors who would take over the medical management of the alcoholic, and the list has been furnished interested departments and clinics. The Chronic Illness Committee evaluated local nursing homes in accordance with its newly established standards of care and, with the Chronic Illness Service Center, hopes to find some solutions to local problems of care of the chronically ill and aged. A pilot home care program proved most successful. The Rehabilitation Committee met with representatives of the health agencies concerned with rehabilitation and hopes to coordinate community facilities in this field.

One of the highlights for San Francisco was acting as host for the A.M.A. annual session. The society furnished one of the outstanding features of the meeting by its sponsorship of the highly successful "Tommy" open heart surgery television program. (The program was an "extra" on the series that the society has co-sponsored with the Health Council for three years.)

The society's largest function of the year was a joint cocktail party with the dental society and the respective auxiliaries, as part of its continuing program of maintaining close liaison with other professions.

The first "expert witness panel" in northern California was established, and the society published its first pictorial membership directory.

In common with like committees all over the state, the Public Assistance, Legislative and "grievance" committees and those concerned with medical economics worked arduously. Our society enters a new year well aware of the acutely complex problems that face organized medicine in California.

Respectfully submitted,

SAMUEL R. SHERMAN, *Councilor,*
Seventh District

EIGHTH COUNCILOR DISTRICT

Alameda and Contra Costa Counties

To the President and the House of Delegates:

The year 1958 saw the continuation of the numerous public and professional activities initiated in the past two years. Notable developments were made by the Doctors Insurance Committee, Disaster Committee and Blood Bank Committee.

The Doctors Insurance Committee, with the assistance of an Association retained insurance counsel, submitted to numerous brokers requirements for a major hospital expense program for A.C.C.M.A. members which would have no age limit, be based on the co-insurance principle, be economical, have a ten thousand dollar top limit for each member of a doctor's family, and require no physical examination. The committee was successful in securing a carrier. Through October, 1958, 1,055 members have elected the group coverage.

The nation's largest disaster exercise for medical services was developed and sponsored by the A.C.C.M.A. Disaster Committee, June 21, 1958. Entitled "Operation Star," the test involved 3,000 volunteer "earthquake casualties" from throughout the two counties, 1,000 doctors, 23 hospitals, the Armed Services, local CD units, ancillary services and the Red Cross. Four hundred and fifty observers from the United States, Alaska, Panama and Hawaii witnessed the 6 p.m. to midnight demonstration.

The Blood Bank Committee, sitting as the administrative committee for the A.C.C.M.A. Poison Information Center, was told on November 21 that the center had received its 1,700th call that day, since its opening August 1, 1957. The center's service, available to physicians only, has been subscribed to by two neighboring county medical societies and thus serves as those counties' poison center. The service continues to expand.

The Distribution of Medical Care Committee reviewed 301 fee complaints over the past year—48 from union health and welfare plans, 217 from Blue Cross-Blue Shield, and 36 from individual patients. The substantial (and welcomed) increase in use of this committee by the Blue Plans and by union health and welfare programs made it possible to establish two DMC committees for more rapid handling of cases. Commendation of this committee's work was made in a letter from one of Northern California's largest union welfare plans and appeared as the cover of the July '58 A.C.C.M.A. *Bulletin.*

The counsel of the Medical Services Committee continued to be sought during 1958 by labor, governmental agencies, and employers for the improvement of benefits, indemnities, and mechanics of their health plans.

California's first county medical society sponsored medical scholarships were awarded during 1958. Two $500 grants were made: One to a fourth-year medical student at Stanford; one to a third-year medical student at U.C. The recipients of these two annual awards must be legal residents of Alameda or Contra Costa county at one of the above schools.

The newly created Fraudulent Practices Committee has met frequently with representatives of the State Board of Medical Examiners, C.M.A. Cancer Commission, Federal FDA, State Food and Drug Bureau, and local district attorneys. The committee has assisted these enforcement agencies by forwarding information received from the public concerning fraudulent and illegal practices of quacks and limited-practice licentiates. At least three of such practitioners have been apprehended and prosecution aided through the committee's assistance.

The A.C.C.M.A. Executive Committee this past year worked in close conjunction with those county medical societies who felt the most productive manner of making the Public Assistance Medical Care program workable was to assist in formulating improvements.

"The Doctor in a Changing Legal World" was the subject of a three-meeting lecture series sponsored by the Graduate Medical Education Committee in April. Professors Louisell and Riesenfeld of U.C.'s Boalt School of Law were the speakers for the "standing room only" sessions.

According to the Credentials Committee, A.C.C.M.A. membership reached 1,700 on October 31, 1958.

Respectfully submitted,

DONALD LUM, *Councilor,*
Eighth District

NINTH COUNCILOR DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Solano and Sonoma Counties

To the President and the House of Delegates:

Again, as has been the case in many past years, the California Medical Association in this district has been preoccupied with the massive growth of population, large influx of new physicians and a restless postwar attitude on the part of many people as they watch major changes occurring in time-honored traditions and public custom. This district has been, as in the past, most preoccupied by the changes in the State Public Assistance Medical Care Program that were so much the discussion at the last meeting of the House of Delegates. Some of our counties in this district have voted unequivocally to try to oppose this individually, whereas other counties are not united in this regard and instead hope to modify the program so as to make it fit in better with the customs and philosophy of medicine.

Your councilor while visiting his various counties and while escorting the president-elect, Doctor Reynolds, has made a real effort to ascertain the attitudes of societies and individuals in preparation for trying to solve these difficult decisions in the best possible way. Other subjects of recurring importance are correct attitudes regarding fee schedules, relative value lists, establishment annually, or at regular intervals, of the proper value for the unit of work. These points were repeatedly emphasized at meetings.

Last year we had the first of our meetings of the C.M.A. delegates and alternates, which was held in Sonoma. The basic problems of medicine as related to society were discussed and I feel all of the attendant physicians were able to express themselves effectively and to impart their attitudes into the total consciousness of the group. I believe that because of this meeting our delegates were able to come down to the annual meeting better informed on the subjects, having had an opportunity to discuss the problems beforehand with their own societies and representatives and able to fit in better with the large C.M.A. organization as it evolves at the annual meeting. It is expected that it will be possible to have another such meeting of our delegates in this district before the latter part of February even though admittedly this year, with the change in the date, it will be difficult to crowd this meeting in.

The regular meetings on an annual basis with the various county societies have been most worthwhile and the individual societies most attentive and alert to the message presented by the state officers.

At the Mendocino-Lake County group, Dr. Robert Smalley was most gracious in opening his home to the visiting officers for an informal discussion and relaxation prior to the main meeting held somewhat north of Ukiah. The turnout was excellent and the presence of the woman's auxiliary made the meeting all the more significant and successful. The discussion from the floor was worthwhile and to the point and I have reason to believe that the audience left the meeting having gained real value from it.

The Humboldt-Del Norte annual county meeting, held the next night, was excellent. At the meeting the general attitudes of the C.M.A. regarding basic problems were reviewed and also the fact that the C.M.A. in its political interests was basically nonpartisan and that it was in the best interests of physicians as individuals to vote for members as representatives who believe in the basic philosophies that medicine stands for rather than on the basis of party lines.

The meeting at the Napa County Society had the advantage again of the auxiliary members present. Past A.M.A. President Dwight Murray had the visiting officers at his home briefly before the open meeting for a pleasant meeting of the local county society officers and their wives. The convened meeting was especially worthwhile in the discussion of the attitudes of this county society and these discussions continued to a generous degree after the formal meeting adjourned.

At the Sonoma County Medical Society meeting, the auxiliary, as is traditional, meets at noon on the same day in order to hear the visiting officers at a luncheon. The meeting with the auxiliary was a most pleasant one with the climatic background of a full Indian summer day. The party had the pleasure of being the guests of Mrs. Samuel Akin at her home until it was time for the evening meeting with the physicians. The evening meeting was an active one and frank discussions concerning personal philosophies were readily expressed by members, and were most welcome. At the time of the submision of this report it has not been possible to have our meetings with the Solano County group nor with Marin County.

It is recognized that communications among all of the counties and particularly in the larger districts is a delicate and intricate matter. Your councilor feels that in the past years with the appearance of new bulletins in various counties, communications have improved. A review monthly of some pertinent subject that has occurred at the Council meeting is being submitted to each county editor in the hope that he will find some use for such a report in his bulletin from time to time. Although this represents a distinct amount of extra work on the part of everyone it is nonetheless felt that this is one way to keep our total membership as abreast as possible of the various decisions that have to be discussed, met and decided throughout the year.

Respectfully submitted,

WARREN L. BOSTICK, *Councilor,*
Ninth District

TENTH COUNCILOR DISTRICT

Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo and Yuba Counties

To the President and the House of Delegates:

With this short year between annual sessions the medical affairs of the Tenth Councilor District have been well in order.

The councilor has made repeated visits to all but two of the component county societies and has found the membership well informed and interested and active in California Medical Association programs. There continues to be a considerable amount of question and dissatisfaction with the operation of the Public Assistance Medical Care Program. There is increasing concern over the role of government and labor unions in the establishment of fee schedules for doctors in the area. There is growing awareness of the need for the development of some sort of a fee schedule standard for this purpose and the doctors are interested and active in the development of a new relative value fee study. The doctors in the district are also concerned with the recent political elections and fearful of the trend of federal and state government in further control of medical practice to the detriment of the patient and the profession.

The councilor from the district has attended all Council meetings and participated actively therein. He has attended the annual convention. He attended the House of Delegates meeting of the American Medical Association. It has been difficult to reach conclusions on all of the many difficult and complex problems of medical economics and sociology which have been presented in the past year but this district has made a conscientious effort to approach the problems realistically and with the ultimate welfare of the public as its paramount frame of reference.

Respectfully submitted,

RALPH C. TEALL, *Councilor,*
Tenth District

REPORT OF CALIFORNIA PHYSICIANS' SERVICE

To the President and the House of Delegates:

Before giving a progress report, perhaps a word should be said first concerning the fact that C.P.S. observes its twentieth birthday on February 2, 1959. Many of the founders of C.P.S., and those who served on its early boards of trustees, are able to see for themselves that C.P.S. now stands as a most important factor in the steadily growing field of medical economics. During these 20 years, C.P.S. has paid nearly 250 million dollars to doctors and hospitals for services provided to C.P.S. members. Its benefits are now pro-

tecting 750,000 Californians. And, acting as a fiscal agent for three government programs, C.P.S. has processed claims from private physicians amounting to over 27 million dollars. Certainly, these facts indicate that C.P.S. has served a real need in its 20 years of existence.

Even though this report is being prepared only six months following the 1958 meeting of the House of Delegates, the C.P.S. Board of Trustees is able to report progress on a number of activities since May, 1958.

In line with recommendations made in Resolution No. 27 at the 1958 annual meeting of the California Medical Association, C.P.S. group members and individual members who pay C.P.S. direct are being informed of the fact that costs of providing hospital benefits have increased approximately three times as fast as the costs of providing professional benefits in the last five years.

In an effort to cope with the problem of ever-increasing costs of hospital care, a hospital co-payment principle has been applied to members holding small group contracts and to members of the Continued Membership Health Plan. It is expected that this approach may be the solution to over-utilization of benefits in this field.

In response to requests from specialized groups in the medical profession, C.P.S. has placed on the market a contract which offers protection for complications arising durin the first 30 days of an infant's life, a period not covered by contracts heretofore. A reasonable number of groups contacted have shown interest in this special benefit.

The Study Committee of the board is seriously pursuing the problem of providing coverage for the aged. Suitable solutions are not easily found, principally because of the high utilization and reduced incomes of the older age groups. Methods of prepayment during the working years are among the solutions being considered.

Because of continuing demands for more comprehensive benefits at a cost which can be met, usually by business management, the board is attempting to modernize the entire C.P.S. benefit structure. A "must" on the list of considerations is the retention of professional benefits which reflect the actual practice of medicine.

A pilot program is being undertaken in cooperation with the San Joaquin County Medical Society to replace the present two-visit deductible medical benefit with a "unit deductible" plan. It is hoped this experiment will answer the problem which arises when the patient's first visit includes an unusually large amount of work-up.

It is hoped that an experiment in the Long Beach area will also be successful. Here the attempt is to reduce hospital utilization by liberalizing diagnostic procedures in the office.

California Physicians' Insurance Corporation, a wholly owned subsidiary of C.P.S. which is licensed to sell indemnity insurance, continues to show healthy growth. Premium income has increased 25 per cent since April 1, 1958. It is anticipated that this will be increased a like amount by December, 1958. Thirty-one groups are now covered and brokers are recognizing the organization by inviting it to bid on prestige business.

C.P.I.C. offers not only indemnity plans of the usual type but also two other popular policies. One is a major medical of the "corridor type." It becomes effective after the basic contract benefits are exhausted and after a deductible or "corridor" payment of anywhere from $100 to $300 is made. The second is a comprehensive deductible policy which pays, as an example, 80 per cent of specified costs as soon as the contract holder has accumulated $100 of deductible expense. This latter type is not predicated on any basic benefit plan.

At this writing, a plan for a "corridor type" major medical plan is being submitted for a C.P.S. group of nearly 100,000 members.

Because cost of providing services as well as operating costs have continued to rise, all methods and procedures of operation in every department of C.P.S. have been scrutinized during the summer months of 1958. It has been found possible, with the aid of expert outside help, to streamline certain procedures and make appreciable savings. Others are still under study.

Wherever possible, departments are redistributing workloads when employees leave for reasons of maternity, marriage, etc., thereby reducing the payroll. The board extends its compliments to the administrative staff and employees of C.P.S. for their earnest and diligent approach to this and many other problems confronting them.

Largely because the maintenance of proper communications is a real problem in the medical profession, the duties of the Board of Trustees of C.P.S. are not always understood by all members of the California Medical Association. Therefore, I will devote the remainder of this report to clarifying these responsibilities.

First, let us review the composition of the board. There are nineteen members who direct the operations of CPS-Blue Shield. Sixteen of these members are elected for three-year terms by the House of Delegates. Three are appointed by the C.M.A. Council for one-year terms. The board is comprised of fourteen practicing physicians and five distinguished, public-spirited business leaders, all of whom serve without compensation through eight organized committees.

It was in 1952, acting upon the recommendations made in the report of the C.M.A. Study Committee on C.P.S., that the number of board members was increased to provide for three members to be appointed from the C.M.A. Council. This step was taken to improve liaison between the C.M.A. and C.P.S. Most certainly, this has proven to be an effective device.

The board has certain duties imposed by law and others generally required of any good organization. In accordance with the By-Laws of C.P.S. the board must "arrange, handle, conduct and maintain all property and assets as well as invest and reinvest all monies, funds and securities."

C.P.S. fee schedules are proposed by a Fee Schedule Committee. The responsibility of the C.P.S. board is to make sure that new schedules or changes in existing schedules are within the ability of C.P.S. to pay and remain financially sound.

The Board of Trustees is sensitive to the opinions of the medical profession as expressed in the House of Delegates, yet must base its decisions on what is best for the separate organization—California Physicians' Service. In the final analysis, all decisions of the board must be made in keeping with the aims and purposes of the organization—which are to provide Californians with a membership plan that will help them meet the major expense of medical, surgical and hospital care and, at the same time, adhering to the principles necessary to preserve high standards of medical service and maintain proper physician-patient relationships. In following these aims, the board must be sensitive to the needs of *both* the medical profession and the public.

The board believes it has the support of the great majority of the members of C.M.A. not only in carrying out its duties but also in its philosophy that C.P.S. must remain a strong and effective organization ready to solve new economic problems in such a way as to continue to provide personalized medical care of a high quality for a significant number of the population of the State of California.

Respectfully submitted,

ARLO A. MORRISON, *Chairman of the Board*

REPORTS OF COMMISSIONS

CANCER COMMISSION

To the President and the House of Delegates:

This report covers the activities of the Cancer Commission during the few months since our last report presented in April 1958.

There has been one meeting of the commission and one meeting of the Executive Committee during the report period.

The commission continues to concern itself actively with the problem of cancer quackery. The Interim Committee of the Senate Public Health and Safety Committee has continued to hold public hearings on the question of anti-cancer quack legislation, and in May of this year a hearing was held in San Francisco at which several of the better known proponents of unorthodox cancer treatment methods appeared. The Cancer Commission was instrumental in obtaining several physicians of national prominence in the field of cancer to give testimony in rebuttal to those opposing anti-cancer quack legislation. The testimony was well received by the committee and enjoyed wide publicity in the press.

It is anticipated that the Senate Interim Committee will now prepare legislation to be introduced at the next session of the Legislature in January 1959. Preliminary information indicates that the legislation that will be introduced will be in conformance with the principles as outlined in Resolution No. 59 passed by the House of Delegates at their April 1958 session. If such is the case, the Legislative Committee has been directed by the Council to actively support such legislation.

The Cancer Commission will attempt to keep the medical profession apprised of the progress being made in securing adequate anti-cancer quack legislation.

The brochure entitled "Unconventional Cancer Treatment Methods" published by the Cancer Commission is being revised in the light of sworn testimony given at the hearings of the Senate Interim Committee and will be distributed to the entire membership as soon as it becomes available.

Several unorthodox practitioners are still very active in California and until such time as there is adequate legislation to deal with the problem, they will no doubt continue to be active. Hardly a day goes by that one or more inquiries from both physicians and the public concerning one or more of these practitioners is not received.

Doctors Cline, Garland, and Wood continue to be active members of the American Cancer Society's national Committee on New and Unproved Cancer Treatment Methods, which is studying the problem of cancer quackery at the national level. The past experience of the Cancer Commission in the field of cancer quackery is proving to be of great value to the thinking and activities of this national committee.

Before closing this part of my report I would like to pay particular tribute to the following organizations which have been most helpful to the Cancer Commission in our effort to curb cancer quackery: The Division of Food and Drug of the California Department of Public Health, the California Board of Medical Examiners, the California Board of Osteopathic Examiners, the various cancer committees of the county medical societies, the Bureau of Investigation of the American Medical Association, and the Federal Food and Drug Administration.

The other activities of the Cancer Commission may be summarized as follows:

1. *Consultative Tumor Boards.* Since the last report no new tumor boards have been approved by the Cancer Commission, but several which have been activated already or are in the process of being activated will be considered by the Cancer Commission for approval within the near future. As of the present time there are 59 tumor boards *fully approved* and 10 that are *provisionally approved.*

The California Division of the American Cancer Society through its several branches continue to give financial support for secretarial assistance and consumable supplies to these approved tumor boards.

The medical director continues to give consultation to those tumor boards having administrative problems, as well as assisting those hospitals wishing to establish new tumor boards. Routine visits to established tumor boards are being made by the medical director whenever possible.

2. *Cancer Conferences.* There have been no cancer conferences given to county medical societies since the last report. The 1959 series of cancer conferences is in the developmental stage and it is anticipated that about the same number of conferences will be given as last year.

Negotiations are under way with the various chapters of the California Academy of General Practice to present cancer conferences at their meetings along the same lines as those conferences given to the county medical societies. It is hoped that during 1959 several such conferences can be given.

3. *Tumor Tissue Registry.* The Registry continues to be very active under the guidance of Dr. Robert W. Huntington, Jr. of Bakersfield as chairman, and Dr. Weldon K. Bullock of Los Angeles as registrar.

Two tissue slide conferences are planned for the current year, one to be a Pre-Convention Conference and another a Mid-Year Conference. The Pre-Convention Conference will deal with cancer of the thyroid.

Since the last report one new senior study group has been established in the West Los Angeles area. This brings the total to eight such study groups now meeting at monthly intervals throughout the state. In addition there are several so-called junior study groups functioning throughout the state who also have an opportunity to review the material submitted to the Registry. It is through the mechanism of the senior and junior study groups that most of the pathologists in the State of California have an opportunity to study the material and thus gain a great deal of information that would not be otherwise available to them. A wide variety of tumor diagnostic problems are continually being studied by the Tumor Tissue Registry, thus offering to the practicing pathologists a wide variety of tumor tissue pathology and thus elevating their diagnostic abilities in this most important field.

The activities of the Tumor Tissue Registry are supported by funds from the Cancer Commission, the California Division of the American Cancer Society, and the Staff Association of the Los Angeles General Hospital and those pathologists who participate in the senior study groups ($60 per person for receipt of slide sets).

The Tumor Tissue Registry program is considered by many as one of the major contributions to professional cancer education in California.

4. *The Annual Pre-Convention Radiology Conference.* The conference this year will be conducted under the chairmanship of Dr. Louis J. Bonann of Los Angeles. Several interesting diagnostic and therapeutic problems are being arranged for presentation and should be of great interest to the practicing radiologists in the state.

5. *Central Tumor Registry, California Department of Public Health.* The Advisory Committee of the California Medical Association to the Central Tumor Registry, the California Department of Public Health, and the Cancer

Commission have worked closely with the personnel of the Central Tumor Registry in developing statistical information concerning follow-up and "end results" for distribution to the medical profession and to hospital administrators.

Two very significant studies are currently under way—one dealing with cancer of the breast and the other with cancer of the skin, which should be concluded at an early date. Dr. Lester Breslow, chief of the Bureau of Chronic Diseases, who has primary responsibility in the Central Tumor Registry and his staff should be complimented on the fine work that they are doing and for the national recognition that the Registry has received.

6. *Regional Meetings.* Five regional meetings are being planned by the commission. These meetings will have as their purpose: To establish a common meeting ground where the Cancer Commission and the local practicing physicians of California can meet and discuss mutual problems relating to the cancer control program of the state.

7. *American Cancer Society, California Division.* Because of the ever increasing program of research, education and service of the California Division, more and more time of the medical director has been spent in rendering consultation to the division in these various spheres of interest. Many of the programs relate directly to the medical profession. As a consequence, it is vital that the Cancer Commission, through the medical director, be constantly informed concerning these programs and by the same token consultation can be given to the California Division on matters pertaining to the medical profession.

Several members of the Cancer Commission and the Advisory Committee are currently serving on important committees of the California Division, and thus are in a position to render first hand guidance to the activities of the division. Currently twelve members of the Cancer Commission and the Advisory Committee are serving on the board of directors of the California Division, and two members of the Cancer Commission are serving on the Executive Committee of the board. The medical director, by invitation, attends all the meetings of the major committees of the division including the board meetings and the Executive Committee meetings.

The chairman wishes to express his appreciation to the other members of the Cancer Commission and the members of the Advisory Committee for their diligent efforts and support, without which it would have been impossible to report substantial progress.

Respectfully submitted,

DAVID A. WOOD, *Chairman*
Cancer Commission

COMMISSION ON MEDICAL EDUCATION

To the President and the House of Delegates:

The Commission on Medical Education has met at periodic intervals to review the work of the committees serving under it. Recommendations have been forwarded to the Council for consideration.

The activities of the individual committees can best be explained through the committee reports which are listed below.

Respectfully submitted,

ALBERT C. DANIELS, *Chairman*
Commission on Medical Education

Committee on Maternal and Child Care

To the President and the House of Delegates:

Investigations on maternal mortality were initiated by the above mentioned committee on August 1, 1957. The committee is divided into two main components: (1) The maternal mortality component, (2) the perinatal mortality component.

Maternal mortality component: From August 1, 1957 through October 31, 1958, a total of 209 maternal death certificates have been received for investigation. Sixty-eight of these have been completed. The breakdown by district is as follows:

District	*Chairman*	*Total Maternal Death Certificates Received*	*Completed Studies*
I	James W. Ravenscroft	44	20
II	William B. Thompson	92	25
III	T. Floyd Bell	44	10
IV	Warren E. Jones	29	13
	Totals	209	68

Progress in this component is very satisfactory. Dr. Donald Harrington, chairman, resigned in 1958 and Dr. James W. Ravenscroft was appointed to replace him.

Since the beginning of the program in 1957, the state was divided into four regions for the purpose of maternal mortality studies. This number was originally selected upon the basis of the expected number of maternal deaths in each region. However, experience has shown that Region IV should be further subdivided into two regions because of the distance required for travel.

Thus, Region V has been created to cover Inyo, Mono, Fresno, Kern, Kings, Madera and Tulare counties. Doctor Vaughn of Fresno has been named regional chairman.

A meeting of the four regional directors of the maternal mortality component, together with Drs. Corsa and Montgomery of the California Department of Health, brought agreement on a final draft of the questionnaire form to be used in the maternal mortality study. This culminated a year's work on this problem. A form of instruction for use of the final draft is being formulated by Dr. Warren Jones. We anticipate the new questionnaire will be in use by January 1, 1959.

Perinatal Mortality Component: Investigative work on perinatal mortality is still in the organizational phase. On June 2, 1958 a letter on perinatal mortality was sent to the secretary of each county medical society and to the chairman of the perinatal mortality committees in the state. This letter urged the formation of perinatal studies on a county or hospital basis.

Dr. Robert Chinnock of Los Angeles and his committee have been active. They have formulated a questionnaire to study the problem on hemorrhagic disease of the newborn. However, this study is awaiting financial support and approval by the Council of the C.M.A. It has been delayed primarily because of the legal problems.

Goals to be achieved in 1959: (1) Most important is the desire for passage of a legal immunity bill. Mr. Hassard has stated that a new bill will be introduced in 1959 which will provide in effect that studies relating to the causes of illness or death or relating to morbidity or mortality will be "privileged" and will not be subject to production in court; (2) further education of C.M.A. members, hospital administrators and county health officers regarding the entire program; (3) further encouragement of perinatal mortality studies by county medical societies and/or hospitals; (4) progress on the special problem of hemorrhagic disease of the newborn.

Respectfully submitted,

JAMES W. RAVENSCROFT, *Chairman*
Committee on Maternal and Child Care

Committee on Medical Education and Hospitals

To the President and the House of Delegates:

The committee has held no meetings during the past seven months and has had no business referred to it.

The chairman has participated in the meetings of the Commission on Medical Education.

In 1957 House of Delegates resolutions 15 and 21 were referred by the Council to this committee for consideration. The committee has reported back to the Council its recommendations. The Council has requested that these two resolutions and this committee's recommendations be reviewed by the Commission on Medical Services.

Respectfully submitted,

WALTER E. MACPHERSON, *Chairman*
Committee on Medical Education and Hospitals

Committee on Postgraduate Activities

To the President and the House of Delegates:

During the past year your Committee on Postgraduate Activities has continued the program underway since 1950. The undersigned has acted as chairman of the committee, assisted by Herbert W. Jenkins of Sacramento, John E. Young of Fresno, and ex-officio members for the medical schools as follows: Seymour M. Farber, University of California; Lowell A. Rantz, Stanford University; Phil R. Manning, University of Southern California; Thomas H. Sternberg, University of California at Los Angeles; and Harold M. Walton, College of Medical Evangelists. Paul D. Foster, Los Angeles was added to the committee on May 1, 1958 to act as chairman of the C.M.A. Annual Session Motion Picture Program, organization of which has now become a responsibility of this committee beginning with the 1959 session.

The advisory group of district representatives from the various geographical areas of the state are as follows: E. F. Cain, Anaheim; G. Horace Coshow, Carpinteria; H. C. Covington, Selma; Charles H. Cutler, Sacramento; Max Dunievitz, Auburn; James B. Massengill, Ukiah; J. Leslie Spear, Santa Rosa; and Edwin W. Tucker, Monterey, continued to assist. Due to the resignations of Dr. Massengill and Dr. Spear, two new district representatives were appointed on July 1, 1958: Robert S. Quinn, Santa Rosa and Patrick Allanson, Ukiah. All these physicians have been active in postgraduate activities over the past several years and they were able to assist the Postgraduate Committee greatly in bringing to our attention special problems and needs for postgraduate work in all parts of the state.

The committee has conducted five two-day Postgraduate Regional Institutes in five regions of the state, each comprising several county medical societies as follows: Southern Counties at Arrowhead Springs Hotel; North Coast Counties at Hoberg's Resort; San Joaquin Valley Counties at Fresno; West Coast Counties at Carmel; Sacramento Valley Counties at Sacramento. The fee was $20.00 (after first registration, $10.00 each additional Institute) in the 1958 season. To partially cover increasing instructional costs due to increased programming of concurrent panels on each program, the fee will be raised to $25.00 for each Institute during the 1959 season.

The academic program at each Institute is planned by one of the five medical schools in the state after consultations with the local regional committee representing the various county medical societies.

The committee is especially indebted to the five medical school postgraduate directors and their fine faculties for the excellent programs they have furnished, and to regional chairmen: Elmer O. Carlson, Ontario; Howard C. Miles, Salinas; Fred Schroeder, Sacramento; Henry L. Tiesche, Fresno; and Alfred A. Thurlow, Jr., Santa Rosa for their unstinting efforts in handling all details ensuring the success of these conferences. The presidents and committees of the Woman's Auxiliaries have assisted greatly with registration and entertainment of wives during the programs.

Circuit Courses, consisting of lectures and conferences, and afternoon clinics in some cases, four in fall and four in spring, were given in the northern part of the state in Eureka. Ukiah, Napa, Dunsmuir, Chico, Marysville and Auburn, by faculty groups from the University of California and Stanford University Schools of Medicine. The fee was $30.00 for the series of eight, or $20.00 for the spring series of four. We are grateful to Dr. Farber of University of California and Dr. Rantz of Stanford University and their faculty members who arranged and presented the programs. Local chairmen for Circuit Courses are to be thanked for their continued cooperation. Several resident physicians accompanied instructors from the two schools on the circuit tours, this project supported financially by the C.M.A. public relations department.

Circuit Courses were given for the second time in March, 1958, in San Luis Obispo, Santa Maria and Santa Barbara. The program on "Pathological Physiology and Its Clinical Application" was put on in each town, on consecutive days by a faculty team of three from U.C.L.A. Medical Center.

This year, the Committee on Scientific Work requested that the Committee on Postgraduate Activities, in cooperation with the three southern medical schools, organize postgraduate courses as a part of the scientific program of the California Medical Association Annual Session in April in Los Angeles (1958). Three nine-hour postgraduate courses were offered.

During the 1957-58 season the California Medical Association medical schools jointly sponsored Postgraduate Courses had a total enrollment of 1,000 with 154 faculty members participating on the programs. There were also 102 participants from various county medical societies (either on program or planning committees) on the Postgraduate Institutes and Circuit Courses.

A recent survey of enrollment in C.M.A. sponsored Postgraduate Institutes and Circuit Courses in the last three years showed that the total number of different doctors registered in one or more was 1,933 (some of these registered for as many as 10 courses during this period), 1,473 of which were general practitioners or 67 per cent of the 2,200 nonurban general practitioners in the state. There were 382 specialists and 78 physicians from Los Angeles or San Francisco enrolled. Programs for the Postgraduate Institutes and Circuit Courses are not circularized to physicians in Los Angeles, San Francisco or Alameda counties.

Medical Dates Bulletin, a monthly publication listing all postgraduate courses and medical meetings given in the state, has been published by this committee for the past five years. The *Bulletin* mailing list of approximately 1,000 includes presidents and secretaries of all medical organizations in California, hospitals, medical schools, libraries, etc. The *Bulletin* is published monthly in CALIFORNIA MEDICINE and is offered for publication to all county societies in the state. Many county bulletins publish all or part of *Medical Dates Bulletin* monthly.

From 12 issues of *Medical Dates Bulletin*, July 1, 1957 through June 30, 1958, a complete listing of all postgraduate courses and medical meetings with educational programs offered during this one-year period has been compiled. Mimeographed copies of this listing are available upon

request. These should be especially useful to program organizers in planning programs which do not overlap in content or dates, or in filling gaps not presently covered.

During the A.M.A. meeting in June, the annual Postgraduate Statewide all-day Conference was held in San Francisco attended by 40 doctors including representatives from the C.M.A. Commission on Medical Education, A.M.A. Council on Medical Education, the five California medical schools, district representatives to the Postgraduate Committee, Institute and Circuit Course chairmen, the president and other representatives of California Academy of General Practice, Cancer Commission, Heart Association and members of other C.M.A. committees including Committees on Scientific Work and Public Relations. This is a unique and important meeting at which work of the past year is reviewed and plans for the coming year are discussed in detail. This year's program was unusually successful and included such items as A.M.A. Quarterly Index, and *Problems of Postgraduate Medical Education.*

Efforts have been continued this year in telling C.M.A. members about new postgraduate courses available to them in the medical schools of the state. Postgraduate directors of the medical schools have given talks at the Institutes regarding new courses available and new teaching methods being used. Announcements of these courses have been made and brochures distributed at program planning meetings and during Institute and Circuit Course programs. Again this year, letters were prepared and mailed to hospitals and organizations regarding several new on-campus postgraduate courses.

The committee was represented at the A.M.A. Congress on Medical Education in Chicago in February, 1958.

I wish also to thank all members of our committee; the regional representatives, county medical association officers and the Council for their generous support of this program. It is a program which is filling a need and one in which all members of California Medical Association can take pride.

Respectfully submitted,

EDWARD C. ROSENOW, JR., *Chairman*
Committee on Postgraduate Activities

COMMISSION ON MEDICAL SERVICES

To the President and the House of Delegates:

The Commission on Medical Services, during the past six months, has, through its committees, been continuously studying the economic factors of medicine.

The reports of the committees, listed below, are self-explanatory.

The commission has used several county executive secretaries following the principle established at the last meeting of the House of Delegates, and it is anticipated that the commission will use their services more in the future.

In view of the widespread interest in foundations for medical care and the growing need for a central source of information on the development of these foundations, the commission established a sub-committee on foundations to serve in this capacity.

All House of Delegates resolutions referred to the commission have been reviewed, and appropriate reports rendered to the Council.

Respectfully submitted,

FRANCIS J. COX, *Chairman*
Commission on Medical Services

Committee on Fees

To the President and the House of Delegates:

As directed by the 1958 House of Delegates, the Committee on Fees has undertaken a comprehensive survey of the C.M.A. membership on fees being charged at this time. In its continuing effort to improve the Relative Value Study, certain new data was requested. Some 16,515 copies of the questionnaire were sent to C.M.A. members with 7,103 members returning the survey. From the data collected and wherever appropriate in terms of statistical validity, a resume of the returns from each county society is to be returned to that county for use as it sees fit. In addition, the committee will use the information gained from the survey to up-date the Relative Value Study. This revision will take several months, and at present it is anticipated that it will be complete by the fall of 1959. This work is carried out using the statistical material as a base plus the aid of a large subcommittee of consultants representing all branches of medicine. All members of the C.M.A. will be furnished with a copy of the revised Relative Value Study once the work is completed.

The committee has continued to meet with representatives of C.P.S., various specialty organizations, and others involved in the third party medical programs requiring the use of fee schedules in an effort to improve and clarify schedules of fees.

It has been encouraging to the committee to find that increasing numbers of health programs are using the Relative Value Study as a basis of indemnities to physicians. Although in many cases the dollar conversion factor has been too low to produce reasonable fees to physicians, it should be noted that through use of the Relative Value Study the proper relationship of fees for services has been maintained. Thus, no branch of medicine has benefited unduly at the expense of other branches.

Respectfully submitted,

H. DEAN HOSKINS, *Chairman*
Committee on Fees

Committee on Government Financed Medical Care

To the President and the House of Delegates:

Your Committee on Government Financed Medical Care, is a large committee. Its effort has been rather intensive work on three major programs, and the committee has been divided into sub-committees, each sub-committee watching and studying itself with the one program.

One sub-committee has been involved with the Veteran's Home Town Care Program, in which veteran is cared for in the physician's office, for service connected disabilities, if he choose to seek this type of care rather than to be cared for at the Veteran's Administration Clinical Centers, or if they are too great a distance to attend these medical centers. This program has involved, for several years, between one and two billion dollars worth of medical care on the part of the physicians in California.

The program, over a period of years, has gradually changed from an administrative standpoint, and with each yearly contract negotiation, changes, as far as the administration by C.P.S., occur. This phase of the program has been taken care of by the California Physicians' Service office, and the committee has acted as a liaison between the California Physicians' Service and the California Medical Association.

Situations which have involved the practice of medicine have been rightfully the duty of the committee to consult upon, and assist with the negotiations. This has involved an increase in the fee schedule, which over a period of several years, has been gradually increased with each negotiation.

An onerous part of this program has been prior authorization, which at first was monthly, then quarterly, and in the near future yearly. It is expected that within the next one or two contract negotiation periods, we will be able to abolish this entirely.

The presence of C.P.S. as a partner and fiscal agent in this contract, has, it has been the feeling of the committee, been a very fortuitous arrangement. There are a number of states in which an intermediary is not employed by the doctors, and in these instances the doctor, we feel, is represented in a very haphazard manner, and it has been the experience of these states, that the program, under the dictation of the Veteran's Administration, tends to wither. It has been our experience that with an intermediary, we have been able to make a better representation to the Veteran's Administration, and have insisted upon a continuation of this relationship.

During the last year, the "Medicare Program" has undergone several changes. There has been a constant slight alteration of administrative methods, which have been primarily the problem of the California Physicians' Service. The medical societies in the state have cooperated in the administration of individual cases through the insurance review committees, which have functioned throughout the state in a very salutory manner. The Department of the Army has accepted, in an overwhelming majority of the cases, the decisions of the insurance review committees, without complaint. This, your committee feels, has been a fine step towards the "policing of our own problems" and has placed us in a very favorable light.

During the last Congress, there was a widely publicized reduction in the appropriations for the "Medicare" program. It was pointed out by the Congress, that the "Medicare" program had been used by the Department of Defense for a greater number of the recipients than had been originally planned in the Bill, and after a great deal of committee hearing, the Department of Defense was directed to limit its expenditures to 71 million dollars for the next fiscal year, and to carry a tighter rein upon the number of recipients utilizing the program than before. This, in the long run, will have a profound effect upon the Medicare program in California. However, this effect will be only in the eligibility of certain people to receive care under the program rather than any major changes in the program itself.

The Liaison Committee to the Department of Social Welfare has worked in close cooperation with the Department of Social Welfare. Meetings have also been held with many of the component county medical societies.

During the year an experimental program aimed at removing prior authorization was initiated and carried to a satisfactory conclusion to the extent that the Board of Social Welfare has approved removal of the prior authorization regulation as of December 1, 1958. This removal is to be done on a county by county basis following the formulation of a plan by the county welfare director and the county medical society. All component medical societies have been informed as to this program. Two county pilot studies are being developed at the present time.

1. A plan submitted by San Mateo County to study the use of the usual fee concept of the O.A.S. Program. This plan was studied by the Liaison Committee and presented to the State Advisory Committee and the State Social Welfare Board with the approval of both of these bodies. Fiscal problems will prevent this plan going into operation until further funds are available.

2. A plan submitted by Santa Clara County Medical Society incorporating the principle of indemnity in the payment of O.A.S. claims. This program is still in the planning stage by the Liaison Committee, Santa Clara County and the Department of Social Welfare.

The resolution of the House of Delegates in the 1958 session charged the Liaison Committee with the responsibility of:

1. Obtaining removal of the requirement for prior authorization. This has been done.

2. Stimulating and cooperating with pilot programs in various counties. This has been done.

3. Stressing county autonomy in the functioning of this program. All counties were notified as to the importance of local autonomy in this program and suggested methods were detailed.

4. That a uniform method of payment be obtained. A survey of the state membership was made and discussions are now in progress with the State Department of Social Welfare to accomplish this end.

5. The remainder of the resolution falls in the province of legislation and is being handled by Dr. Kilroy and the Legislative Committee.

Respectfully submitted,

JOHN M. RUMSEY, *Chairman*
Committee on Government Financed Medical Care

Report of the Committee on Indigent and Aged

To the President and the House of Delegates:

The Committee on Indigent and Aged has met and considered the problem of defining the term "indigent." Two members of the committee attended the A.M.A. National Planning Conference on problems of aging and the committee is actively involved in surveying the activities of county medical societies in this field.

Plans are being made to institute a program in the near future to stimulate and increase local county medical society action in this field.

Respectfully submitted,

THOMAS ELMENDORF, *Chairman*
Committee on Indigent and Aged

Committee on Medical Economics

To the President and the House of Delegates:

The Committee on Medical Economics continues to encourage California Physicians Indemnity Corporation officials to develop and sell a Comprehensive Deductible Health Insurance policy paying to a schedule that is based on the Relative Value Study.

To date no such policy is in operation. Experience acquired by the commercial insurance industry with several similar policies which have been developed and sold in the past two years will undoubtedly pave the way for further development.

The committee has under investigation the following:

1. Labor-sponsored "closed panel" and "complete service" health plans.

2. So-called "cooperative" health plans.

3. The effect on the public health and the health insurance industry of the proprietary hospitals in California.

4. Current "family income levels" in California.

5. Recommendations for implementing Resolution No. 46 of the 1958 House of Delegates, urging "continuing personal responsibility of the patient" in health insurance proposals.

Respectfully submitted,

ROBERT M. SHELTON, *Chairman*
Committee on Medical Economics

Committee on Rehabilitation

To the President and the House of Delegates:

The Committee on Rehabilitation met in San Francisco on June 21, 1958.

The Committee on Rehabilitation is of the opinion that a small percentage of disabled persons require specialized care in multiphasic centers. It further is of the opinion that the information at hand does not determine where these centers should be located and to what extent they should be developed. The present statistics do not reflect accurately the need for multiphasic centers. A study to determine a method by which a survey may be made to determine the number of disabled and their concentration so that an accurate appraisal of the need for multiphasic centers may be arrived at and how these centers may be correlated with private facilities is now under way.

It was further recommended that the county medical societies be stimulated to the formation of committees on rehabilitation within the societies and disseminate certain important principles in the successful care and rehabilitation of long term patients to their membership. It was the feeling of this committee that the county medical societies should provide leadership in solving the numerous problems of long term care and rehabilitation.

Respectfully submitted,

FRANCIS M. MCKEEVER, *Chairman*
Committee on Rehabilitation

COMMISSION ON PROFESSIONAL WELFARE

To the President and the House of Delegates:

Resolution No. 31, adopted by the House of Delegates, directed that this commission undertake a study and prepare a paper outlining the legal status of privileged communications between physician and patient, as well as the ethical duties of the physician with respect to confidences.

Such an article has been prepared by Mr. Howard Hassard and will be published in the near future. We know that this article will prove to be most valuable to our members.

Respectfully submitted,

ARTHUR A. KIRCHNER, *Chairman*
Commission on Professional Welfare

* * *

Committee on Health and Accident Insurance

To the President and the House of Delegates:

The Health and Accident Insurance program of the California Medical Association has continued to be of benefit and service to our members.

This committee did act to obtain bids for an accidental death and dismemberment policy to cover key personnel of the C.M.A., members of the Council and of the committees and commissions, and this became effective October 24, 1958.

The major project of this committee during the year has been to study and survey the field of major hospitalization insurance. With the authorization of the Council, the firm of Milliman & Robertson, Inc., of San Francisco was employed as consulting actuaries to facilitate this inquiry. The advice and assistance of our county executive secretaries has been most helpful. The committee has been exploring a plan for major hospitalization insurance coverage that will not conflict with similar types of coverage that have already been effected in the component societies of the state, but which will serve to provide coverage in areas not presently served.

Respectfully submitted,

HOMER C. PHEASANT, *Chairman*
Committee on Health and Accident Insurance

Medical Review and Advisory Board

To the President and the House of Delegates:

During the past year, the M.R.A.B. has actively consulted with three county societies to assist them in developing professional liability medical panels. The panels in San Diego and San Francisco have been used.

The board has cooperated with the Los Angeles County Medical Association in developing an information center regarding all complaints about their members. This is a pilot study which may assist the L.A.C.M.A. in giving guidance to its members.

A summary of the types of alleged professional liability incidents that are currently being reported to the various insurance carriers has been distributed.

Tetanus causes difficult problems in the field of professional liability, and to medical practice in general. The effectiveness of widespread tetanus inoculation is recognized and accepted. The board, in cooperation with the Public Relations Committee, the medical schools and the State Department of Public Health, has been studying the appropriateness of publishing a paper on the subject and inaugurating a program of education to encourage physicians and the public to cooperate in mass inoculation through private physicians.

Respectfully submitted,

ARTHUR A. KIRCHNER, *Chairman*
Medical Review and Advisory Board

COMMISSION ON PUBLIC HEALTH AND PUBLIC AGENCIES

I. DIVISION FOR PUBLIC AGENCIES

To the President and the House of Delegates:

This commission met as a whole along with the Committee on Rehabilitation and members of the Commission on Medical Services. The intent of this meeting was to consider the general problem of rehabilitation and to initiate steps that would implement a specific definition of rehabilitation in terms that could serve as a guide for the basic policy attitudes of the California Medical Association. A discussion of the broad aspects of rehabilitation followed and a plan was laid down to establish which committees should give this careful consideration and the various channels through their reports should be forwarded in order to have, if possible, this year the formulation of a basic statement on this subject.

This commission for the first time has been divided into essentially two segments, one herewith reporting on Public Agencies. The other division has tentatively been named the Commission on Community Health Services which under the chairmanship of Dr. James MacLaggan has been functioning quite separately.

Respectfully submitted,

WARREN L. BOSTICK, *Chairman*
Division for Public Agencies
Commission on Public Health and Public Agencies

* * *

Committee on Mental Health

To the President and the House of Delegates:

The committee has been meeting at regular intervals during the year and meetings have been held with the chairmen of the Mental Health Committees of the county medical societies.

The question of the implementation of the Short-Doyle program has been considered as well as matters pertaining to mental health education, to relationships between medi-

cine and psychology, to methods of coping with addiction problems and to closer integration of psychiatric and psychologic practice into general medicine in both outpatient and hospital settings.

The Short-Doyle program is now operating in eleven counties and one city. It is apparent that the city of Santa Monica will soon utilize the program. In other areas there has been resistance and/or inertia based largely on fears of the program which, in the opinion of the committee, have little foundation in fact.

The relationships between medicine and psychology have been worked out in meetings with the Psychology Examining Board and representatives of the California State Psychological Association. Certification has been established by law and the November, 1958 issue of CALIFORNIA MEDICINE explains its significance.

A subcommittee under the chairmanship of Rudolph Toller, M.D. did exhaustive study on the adequacy of the century old McNaughton Rule as the legal test of criminal responsibility. A substitute statute was prepared and submitted to the Council of the California Medical Association for study.

The committee has recommended the initiation of a pilot study on the etiology and treatment of narcotic addiction.

During the coming year work will be done on insurance coverage for psychiatric patients and on encouraging expansion of treatment of psychiatric patients in general hospitals. We will also concern ourselves with increased postgraduate training for general practitioners in the field of psychiatry.

Respectfully submitted,

STUART C. KNOX, *Chairman*
Committee on Mental Health

Committee on Other Professions

To the President and the House of Delegates:

The Committee on Other Professions has met on several occasions during the last year, and has maintained contact with, the dental, osteopathic, and nursing professions. A member of this committee has represented the C.M.A. at meetings of the State Coordinating Committee on Nursing Education. The character and methods of nurse's training are undergoing rather marked changes. This is a subject of interest to medicine, and one where the educators involved have indicated a desire and willingness to have the assistance of medicine in meeting the problems presented. The committee has continued to work with a similar committee from the California Osteopathic Association and some progress has been made in attempting to solve some of the mutual problems which confront the two professions.

Respectfully submitted,

WAYNE POLLOCK, *Chairman*
Committee on Other Professions

Committee on State Medical Services

To the President and the House of Delegates:

It has been the custom over past years that this committee has been the direct liaison between the California Medical Association and the State Department of Public Health, Malcolm Merrill, M.D., director. The meetings with the director of public health have been regular and fruitful. Basic points of philosophy are repeatedly discussed and analyzed to the mutual benefit of all members.

Through this committee as it reports to the Council, it is possible to present the various needs and wishes of the State Department of Public Health to the Council. The general tone has been one of mutual confidence and great cooperation. The subjects covered have extended from the Crippled Children's Services and the projects being considered by that through the subject of the departmental budgets and the various services that the department is considering instituting. It has been possible to use this occasion to let the director know of the attitudes of the California Medical Association and to derive decisions in which there can be the greatest possibility of cooperation.

This committee received a report from Doctor Sherman's special committee that was appointed to study the question of the per diem payments to physicians under the Crippled Children's Service program. Following the receipt of the recommendation of that committee, this committee determined a method of implementation that is considered moderate and equitable. The principle was recognized that "professional services of physicians are to be paid for as professional services." Pathologists and radiologists are professional services provided by licensed physicians and surgeons in the state. The committee recommended that with these principles in mind and fully supported, on an interim basis that the Crippled Children's Service should permit any pathologists or radiologists to submit his bills independently if he does so in writing and if this request is countersigned by the administrator of the hospital concerned. This recommendation was to be presented to the next meeting of the Crippled Children's Service Advisory Committee.

This continues to be one of the most effective and active committees in the California Medical Association and should serve as a prototype for other committees that relate themselves to major departments of the state that are concerned with a providing of various health services to the people.

Respectfully submitted,

WARREN L. BOSTICK, *Chairman*
Committee on State Medical Services

Committee on Veterans Affairs

To the President and the House of Delegates:

This committee has had no problems referred to it by the Council and up to this date has had no committee meeting.

Respectfully submitted,

CHARLES B. HUDSON, *Chairman*
Committee on Veteran's Affairs

II. DIVISION FOR COMMUNITY HEALTH SERVICES

To the President and the House of Delegates:

Only one meeting of this division was held this year, intended as an organizational meeting.

Plans for coordination of activities of the committees in this division are underway and should be activated by the spring of 1959.

Respectfully submitted,

JAMES C. MACLAGGAN, *Chairman*
Division for Community Health Services
Commission on Public Health and Public Agencies

' ' '

Committee on Allied Health Agencies

To the President and the House of Delegates:

The new committee on Allied Health Agencies has had two meetings during the current year. At the first meeting an attempt was made to determine the scope of activities of the committee and develop plans for the future.

At the second meeting a more definitive approach was made to the problem. A guide for county societies in their relations with health agencies is being developed and shall

be available for guidance of those county societies interested in the near future. The committee is in the process of collecting statistical data regarding the role of voluntary agencies in the over-all picture of the health needs of the state. Any useable information derived from this study shall be available to interested county societies.

As a third function, this committee stands ready to help and advise any county society in any phase of their relationship with the voluntary agencies.

Respectfully submitted,

James C. MacLaggan, *Chairman*
Committee on Allied Health Agencies

Committee on Blood Banks

To the President and the House of Delegates:

The Committee on Blood Banks has held no meetings since April. However, the committee is constantly in touch with the blood banks throughout the state and we are happy to report that all banks are functioning well and are operating within the framework of the ground rules adopted by the C.M.A. Council for continued C.M.A. sponsorship.

Respectfully submitted,

Andrew M. Henderson, Jr., *Chairman*
Committee on Blood Banks

Committee on Civil Defense and Disaster

To the President and the House of Delegates:

The Committee on Civil Defense and Disaster consists of the following physicians: Wayne P. Chesbro, Berkeley, 1959; Frank F. Schade, Los Angeles, 1960, and Justin J. Stein, Los Angeles, chairman, 1961.

The members of this committee are all members of the Governors Emergency Medical Advisory Committee of which Justin J. Stein is also chairman. This liaison between the California Medical Association and the State Government has been most helpful. The C.M.A. Civil Defense and Disaster Committee participated in all state level meetings with regard to medical plans for a major disaster and helped formulate policy.

The members of this committee have participated in local and statewide conferences and two members attended the A.M.A. civil defense meeting in Chicago in November of 1958. At this meeting, county, state, and national disaster planning was discussed with a review of the national civil defense program.

During the meeting of the A.M.A. in June 1958 in San Francisco, a disaster conference was arranged between this committee and interested physicians, including federal civil defense personnel. One of the highlights of 1958 was the disaster drill sponsored by the Alameda-Contra Costa Medical Association and the Civil Defense organizations of Alameda and Contra Costa counties. Many observers were present at this test exercise. Wayne P. Chesbro is to be highly commended for his part in helping arrange for this most successful test.

Respectfully submitted,

Justin J. Stein, *Chairman*
Committee on Civil Defense and Disaster

Committee on Industrial Health

To the President and the House of Delegates:

The Committee on Industrial Health has not held a formal meeting subsequent to the last annual meeting of C.M.A.

The greatest activity during and subsequent to this year has been within the Subcommittee for the Standardization of Joint Measurements in Industrial Cases, Dr. Packard Thurber, Sr., chairman. The rather arduous task assigned to this committee was completed about two months ago. This revised edition is now in the hands of the publisher and will be available soon. There will be a number of added and changed illustrations as well as a number of pertinent changes in the text.

The subcommittee believes that its next most important function is to get medical schools to teach this standard method to the students and plan to continue in this endeavor.

Although no formal study has been made and no recommendations presented, the Committee on Industrial Health is concerned and interested in:

1. Measurement of work absence due to illness and injury.
2. Industrial Medical Service to cover the small plant (who employ 75 per cent of working population in California).

The chairmen on Industrial Health Committees of the various states are to meet with the Council on Industrial Health, A.M.A. February 16, 1958 just prior to the Congress on Industrial Health sponsored and conducted by the latter. It is here that a two-way discussion with representatives from every corner of the nation interchange ideas, relate experiences, and may actually arrive at recommendations. Of interest is the fact that 42 states have committees quite identical to ours. Your chairman plans to attend this meeting and give and take as best he is able.

Your committee has been active directly and indirectly in developing and participating in various conference, local and state-wide—annual meeting C.M.A.—Western Industrial Health Conference and a number of local, county industrial sections.

Another project favored by us is in respect to School of Medicine, U.C.L.A.—Orientation of Senior Medical Students with Industrial Medical Problems and Summer Vacation In-Plant Indoctrination for the summer preceding the medical students senior year.

Respectfully submitted,

Jerome W. Shilling, *Chairman*
Committee on Industrial Health

Committee on Rural and Community Health

To the President and the House of Delegates:

Your Committee on Rural and Community Health has attempted during the year 1958 to broaden somewhat the scope of its activities, while at the same time strengthening its position in the activities of previous years.

We had the opportunity to assist in the planning of the first California Food Conference. This conference, which was held in April, 1958, was co-sponsored by many of our good friends, including the California Farm Bureau and the California Congress of Parents and Teachers. The conference was well attended and well organized, and it seemed to your committee to be an activity in which we might advisedly play an even more important role in the future.

With the cooperation of the California Farm Bureau we disseminated information on agricultural poisons and sprays to the county medical societies and to the users of these materials.

As in previous years the major portion of our work has been to represent the C.M.A. on the California Rural Health Council. This organization has grown in size, and broadened its scope, to the degree that it is imperative that California medicine continue to be represented at every meeting. I am happy to report that our relationship with the member organizations has remained exceedingly cordial through the past year.

Our fifth annual Rural Health Conference is to be held in Fresno during the spring of 1959. Medicine's part in the conference is expected to be even greater than in the past, and will be of marked interest because the theme and pro-

gram we are developing will enable us to demonstrate the part that the physician can, and does, play in community health problems.

Perhaps more cooperative effort exists between the various lay organizations interesting themselves in health matters, and the county medical societies than your committee is aware of, but we continue to feel that here is where our greatest weakness lies, and where much of our future effort should be utilized.

Respectfully submitted,

ROBB SMITH, *Chairman*
Committee on Rural and Community Health

Committee on School Health

To the President and the House of Delegates:

The C.M.A., through its School Health Committee, has assumed a leadership role in the school health field in California. Much of the credit for this recognition is due to the efforts of Dr. Albert Daniels who was chairman of the School Health Committee from its inception until he resigned the position this year. Under his guidance the C.M.A., starting in 1954, sponsored a number of physician and school conferences on a state and regional level. These conferences proved to be a most effective catalyst in motivating the schools throughout the state to develop sound school health programs; they provided the professional educator not only with working concepts of school health but gave him the guidance and backing of the medical profession. The advances in school health which have been made as a result of these conferences are too numerous to mention, and they form a tribute to the interest and dedication of Dr. Daniels.

The School Health Committee is ever ready to work with the other disciplines in the school health field in order to work out problems as they develop. Thus the C.M.A. is represented on the Advisory Committee for Health, Physical Education and Recreation to the State Department of Education. Efforts are being made to make this representation one of very active participation. In addition, a liaison committee has been appointed to work with the California Teachers Association in the development of guidelines for adequate health examination of teachers and to assist in solving problems of that organization in the general field of health.

An important concern of the School Health Committee has been the encouragement of school health activities of the local medical societies. To this end, in January of 1958 two meetings were held with the members of local school health committees—one meeting in Los Angeles, and the other in San Francisco—and at both a panel of experts was employed to present some basic concepts of school health, and various projects of some of the school health committees were presented.

At the present time the School Health Committee is preparing for a state-level conference to be presented in April 1959, the details of which are still in the development stage, and it is our hope that this endeavor will achieve the success of its predecessors. One of the primary aims of this conference will be to obtain greater participation from the private physician.

Respectfully submitted,

CHARLES A. BRANTHAVER, *Chairman*
Committee on School Health

COMMISSION ON PUBLIC POLICY

To the President and the House of Delegates:

The Commission on Public Policy has held no meetings inasmuch as the two committees serving under it, the Committee on Legislation and the Committee on Public Relations, have reported to and received instructions direct from the Council.

The reports of the two committees under this commission are listed below.

Respectfully submitted,

DAN O. KILROY, *Chairman*
Commission on Public Policy

* * *

Committee on Legislation

To the President and the House of Delegates:

The problems which have occupied the attention of the Committee on Legislation have increased both in number and in scope during the period of one year representative by this interim annual report. Even to the politically uninitiated in our profession it must be evident that matters of medical legislation are playing a constantly increasing importance in the manner in which medicine is practiced in California.

There has been a steady increase in the assumption by government that they are responsible for the health as well as the welfare of the people and this philosophy has been the forerunner of legislative acts, of which the doctors of this state are now quite familiar.

That even such further problems will be introduced is a foregone conclusion and one which will make the work of the Legislative Committee increasingly time-consuming. The year 1958 was a budget session and as such little was introduced in Sacramento directly affecting medicine. More important, however, the year 1958 was an election year and the members of your committee and the representatives of the Public Health League worked many hours assisting our proven friends in the legislature.

Your committee continued to have the very able assistance of Mr. Ben Read, executive secretary of the Public Health League, and Mr. Gene Salisbury, assistant executive secretary of the Public Health League in carrying out the manifold duties imposed upon the committee. Mr. Howard Hassard and Mr. Bob Hubert, legal counsel of the California Medical Association, through their advice and counsel materially assisted your committee in carrying out its various duties.

On behalf of your Legislative Committee composed of J. Lafe Ludwig, M.D., Justin Williams, M.D., and myself I wish to thank the physicians in California and the various executive secretaries who have been such a willing help to your committee throughout this past year.

Respectfully submitted,

DAN O. KILROY, *Chairman*
Committee on Legislation

Committee on Public Relations

To the President and the House of Delegates:

With the permission of the president and the members of the House of Delegates, the members of the Committee on Public Relations request the privilege of making a supplementary report from the floor at the 1959 meeting of the Association.

Your chairman presented, and the House of Delegates approved, the report which recommended that the public relations program of C.M.A. should:

1. Emphasize the interest of the medical profession in the individual and strengthen the doctor-patient relationship.

2. Emphasize the capabilities and limitations of modern medical science and point out that it is not a commodity which can be mass produced and mass distributed but an individual service which is rendered on a personal basis.

3. Intensify the efforts of the profession in the field of medical economics with emphasis both on the patient's desire for freedom of action and his need for secure protection.

4. Continue the program to improve constantly the service rendered by individual physicians to their patients.

The efforts of your Public Relations Committee, which has held February, March, August and December meetings, has been to implement these basic tenets.

A further exposition of this program was made before the Council. This "Action Program of Public Relations for the California Medical Association" has since been printed and distributed to all interested members.

All House of Delegates resolutions referred to the Public Relations Committee by the Council have been acted upon during the past year.

Additionally, your committee, with the assistance of the director of public relations, has:

(1) Been of service to county societies upon invitation; (2) assisted in the public relations aspects of other C.M.A. commissions and committees; (3) conducted meetings with medical students, residents and interns in cooperation with the San Francisco Medical Society and the Los Angeles County Medical Association; (4) arranged the annual tours of the president and the president-elect to the component county medical societies; (5) printed and distributed pertinent literature to the public and the profession; and (6) has edited and distributed a total of 307,000 copies of *Newsletter* during 1958 to members of the profession, members of C.M.A.'s Auxiliary, delegates to the American Medical Association from the component organizations, medical students, residents, and interns and other interested individuals.

In all these and other efforts, your chairman deeply appreciates the active and effective assistance of Doctors Martin, Pollock, Reynolds, West, Lage, Ludwig, Ruddock, Combs, Todd, members of the committee, and public relations department personnel.

The committee wishes particularly to commend the public relations accomplishments of President Francis E. West, who has repeatedly emphasized the profession's interest in patients' welfare in his public appearances and in the internal affairs of the California Medical Association.

Respectfully submitted,

Malcolm S. Watts, *Chairman*
Committee on Public Relations

JUDICIAL COMMISSION

To the President and the House of Delegates:

The Judicial Commission has met and heard the cases brought before this body for adjudication.

Respectfully submitted,

Donald A. Charnock, *Chairman*
Judicial Commission

REPORTS OF STANDING COMMITTEES

COMMITTEE ON FINANCE

To the President and the House of Delegates:

The Finance Committee, formerly known as the Auditing Committee, is charged with the responsibility of reviewing and supervising the financial aspects of the Association's business. This responsibility is expressed each year in the preparation and presentation of a budget for the next fiscal year and in reviewing, each month, the reports of expenditures and receipts.

A budget for the 1959-1960 fiscal year is under preparation at this time, the close of 1958, and will be presented to the Council, and, through it, to the House of Delegates, at the 1959 Annual Session. This budget will contemplate the use of new office headquarters in the building purchased last year and the addition of new service departments approved by the Council. Members of the Finance Committee, including Doctors Sam R. Sherman and Burt L. Davis, will be available at the reference committee hearings and at the meetings of the House of Delegates for a full discussion on all items which will appear in the budget.

Respectfully submitted,

Ivan C. Heron, *Chairman*
Committee on Finance

COMMITTEE ON SCIENTIFIC WORK

To the President and the House of Delegates:

The Committee on Scientific Work has continued to attempt to improve the annual session. The introduction, a year ago, of postgraduate courses was well enough received to warrant continuation this year and it is to be noted that five courses are being offered. A fee is being charged for these courses primarily to make them self-supportive and to be sure sufficient recompense is given to the medical schools responsible for giving the courses. Only the very finest cooperation has been received from the five medical schools.

This year one of the general meetings will be held away from San Francisco at a neighboring atomic energy plant. This will exemplify what can be accomplished by private industry and private enterprise in the face of a great deal of federal regulation and virtual monopoly by its Atomic Energy Commission. Since physicians are great exponents of individual enterprise, it is hoped this part of the meeting will be particularly enjoyed.

The general high level of guest speakers is being maintained. The meeting this year is in San Francisco with attendant difficulties with hotel, exhibition space, etc., which we have not found as great in Los Angeles. We hope the members of the Association will have patience with their arrangements in San Francisco.

Respectfully submitted,

Albert C. Daniels, *Chairman*
Committee on Scientific Work

MEDICAL EXECUTIVES CONFERENCE

To the President and the House of Delegates:

The Medical Executives' Conference, formerly known as the Advisory Planning Committee, has operated for a number of years as a focal point for C.M.A. staff executives and county society executive directors. The conference meets the day before each Council meeting for the discussion of current items and, where deemed advisable, offers suggestions to the Council for its consideration.

The timing of these meetings permits the county executives to attend Council meetings and keep themselves up to date on all matters discussed by the Council. This fact assures a maximum of communications benefit between the Association and the county societies representing more than 90 per cent of the total membership.

During 1958 the conference has programmed its meetings to include outside speakers on current topics of mutual interest. This format has permitted the discussion of such matters as union labor health programs which may be controversial in nature but on which an adequate background is helpful to all medical society executives.

The conference plans to continue its present meeting schedule and to report regularly to the Council on its activities.

Respectfully submitted,

JOHN HUNTON, *Chairman*
Medical Executives Conference

REPORTS OF SPECIAL COMMITTEES

CONSTITUTION STUDY COMMITTEE

To the President and the House of Delegates:

The Constitution Study Committee was reactivated by the Council in August for the express purpose of reviewing the first three recommendations of Resolution No. 23 adopted by the 1958 House of Delegates.

The first recommendation called for an investigation of "the present system of representation in the California Medical Association and [to] establish the validity of any complaints." The second asked that constitutional changes be made if deficiencies were found to exist in the present system of representation.

The third recommendation given to this committee to study was for "constitutional changes that clearly delineate the exact responsibility of the Council to act for the California Medical Association."

The committee has held one meeting, at which it was agreed that the present Constitution and By-Laws set forth the responsibilities and authority of the Council with complete clarity. Accordingly, the committee believes no action is needed on this recommendation.

The first two recommendations, relating to representation in the Association, refer to representation on the Council and in the House of Delegates. It will be remembered that Constitutional changes were made in 1958 to change the representation on the Council. It will also be remembered that suggested changes in representation in the House of Delegates were rejected at the same meeting.

Inasmuch as any changes in either the Council or the House of Delegates are so basic, and inasmuch as a great deal of study will be required before any sound proposals might be made, the committee has asked the Council for additional time to review all the factors involved and to arrive at any proposed recommendations. The Council has agreed to this request and the committee proposes to continue its work during the coming year.

Respectfully submitted,

SAM J. MCCLENDON, *Chairman*
Committee on Constitution Study

COMMITTEE ON ADOPTIONS

To the President and the House of Delegates:

Pursuant to a resolution adopted by the House of Delegates, a standing Committee on Adoptions has been created.

The committee has undertaken the task of gathering material and preparing a manual on adoptions. When the material is assembled, it will be published and distributed. As information is developed about the problems relating to adoptions, it will be passed along to the Council, county medical societies and to other interested committees of C.M.A.

Respectfully submitted,

G. K. HERZOG, JR., *Chairman*
Committee on Adoptions

COMMITTEE ON THE PRIVATE PRACTICE OF MEDICINE BY MEDICAL SCHOOL FACULTY MEMBERS

To the President and the House of Delegates:

The committee has reviewed with the medical schools in the state the 1957 report on this subject which was accepted by the House of Delegates at that time.

The committee has been impressed with the sincerity expressed by the medical schools in their efforts to devise administrative policies which meet the suggestions set forth in the 1957 report. The committee wishes to emphasize that there is no immediate solution to these problems, however, we are confident of the cooperation of the medical schools and of the physicians in seeking mutually acceptable solutions.

It is the hope of the committee to present an oral report to the House of Delegates.

Respectfully submitted,

HERBERT C. MOFFITT, *Chairman*
Committee on the Private Practice of Medicine by Medical School Faculty Members

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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Volume 90 FEBRUARY 1959 Number 2

The Tuberculous Diseases

Originating from Different Species of Acid-Fast Bacilli

EMIL BOGEN, *M.D.*, SEYMOUR FROMAN, *Ph.D.*, Olive View, and DRAKE WILL, *M.D.*, Los Angeles

• **Disease due to the typical human type tubercle bacillus is rapidly diminishing as a result of public health measures and specific chemotherapy. Lesions in man resulting from other kinds of acid-fast bacilli are now being recognized in increasing numbers. Some of these bacilli had been seen before but were confused with typical M. hominis, others were considered to be harmless saprophytes, while others could not be found with the methods used. Special culture media, different conditions for cultivation, new physical, chemical and biological tests, and inoculation into a variety of animal hosts are now available. With their use more than a dozen different strains of human type tubercle bacilli, and more than a score of other species of acid-fast bacilli may now be distinguished. A simple chemical test readily separates the human type tubercle bacilli from all other kinds of acid-fast bacilli. The differentiation of the different human and animal pathogenic acid-fast bacilli from the avirulent saprophytes and other harmless mycobacteria presents great difficulties, but methods are becoming available which usually make this possible. Since the distinction may be of great therapeutic and epidemiologic importance, the effort should be made.**

TUBERCULOSIS is the oldest disease known to man but the terms used to designate it, and their meanings, have changed over the course of the centuries. Hippocrates and other ancient writers described under the name of *phthisis*, a disease characterized by thinning of the body and wasting fever, associated with cough and expectoration, pain in the chest, difficult breathing, rapid pulse, pallor, thirst, loss of appetite, flushed cheeks, winged scapulae, curved nails, diarrhea or constipation, insomnia and loss of voice.[14]

Several hundred years later Celsus, who retained the name *phthisis* for the pulmonary disease, translated the Hippocratic term *phyma*, meaning a nodular lesion in the skin, by the Latin *tuberculum*.[7] Sylvius later used the word *tuberculosis* to designate nodular lesions in the lung.[3] This name was used increasingly thereafter to include a wide variety of pulmonary and extrapulmonary lesions characterized by the production of granulomatous masses or of caseous necrosis.[19]

The coexistence or succession of phthisis or pulmonary consumption with chronic laryngitis, enteritis, fistula in ano, miliary tuberculosis, meningitis, hydrocephalus, pleural effusion, scrofula, cold abscesses or chronic white swellings, lupus, Pott's disease or kyphosis and many other conditions was repeatedly noted. Their true relationship, however, was seldom suspected and diverse ideas as to etiology[11] were entertained. Following the discovery of the tubercle bacillus in 1882 its etiological significance in each of these various conditions led

Presented before the Section on Public Health at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

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to use of the name *tuberculosis*[15] for all of them.

Since the time of Robert Koch the word *tuberculosis* has lost its original significance and has come to indicate any disease which might be caused by the tubercle bacillus. The words *tuberculous* and *tuberculosis* were indeed restricted to those diseases due only to the tubercle bacillus by a formal resolution of the National Tuberculosis Association in 1923.[20] Thus no lesions could be called *tuberculosis* unless the bacillus was believed to be present even though it might be difficult or impossible to demonstrate it, nor could lesions with similar histopathologic features be called *tuberculous* if not caused by the tubercle bacillus.

The word *tubercular* has long been used as synonymous with *tuberculosis* in England and by many people in other countries, but in the United States the specific etiologic connotation has been confined to the latter term. For more than three quarters of a century the disease *tuberculosis* has been defined as any pathologic condition caused by the tubercle bacillus regardless of its manifestations.[9]

Diseases of the lung characterized by nodular or granular appearance, due to many different causes varying from simple inorganic silicosis, inanimate organic lipoid pneumonia, various bacillary, spirochetal, fungal or animal caused diseases and many whose cause is still unknown, such as sarcoidosis or neoplasm, have been grouped together by Virchow and other writers under the name of granuloma.[25] The term *tubercular* has also been used for many years, as prescribed by the National Tuberculosis Association, to indicate nodular diseases of any cause, including tubercular leprosy, tubercular syphilis, sarcoid, or other conditions as well as tubercular tuberculosis.

Koch himself recognized that the tubercle bacillus is by no means the only acid-fast rod which might be discovered. The leprosy bacilli[13] had been seen in tissues a decade before the discovery of the tubercle bacillus, and saprophytic acid-fast bacilli[6] were found in a large variety of other sources soon after the discovery of the tubercle bacillus. Pathogenic acid-fast bacilli, such as were found to cause disease in cattle, birds and even cold-blooded animals were designated special types or varieties of tubercle bacilli even though their pathogenicity in man was questioned by Koch and many others for a long time.

Acid-fast bacilli different from the typical tubercle bacilli were found in a wide variety of other types of lesions in man besides those characteristic of tuberculosis, but in the past these appeared to be rare and were generally poorly described and documented. They were generally disregarded at the time when infection due to human type tubercle bacilli was practically universal and up to one-quarter of the human race had died from its effects.

With the widespread institutional segregation of vectors of tuberculosis and other public health measures during the past century, the incidence of disease due to typical human tubercle bacilli has rapidly diminished. The even more successful attack on tuberculosis in animals has led to similar decrease in the incidence of the bovine and avian tubercle bacilli. As a result, other kinds of acid-fast bacilli, even though unchanged in absolute incidence, now appear more often among positive cultures.[1]

Increased interest in the susceptibility of the bacilli to various bacteriostatic agents, and in other differential characteristics, was stimulated by the introduction of specific chemotherapy. The changes in virulence and other properties of bacilli following unsuccessful isoniazid treatment and the introduction of new tests for pathogenicity and other characteristics have focused attention on such differences. As a result of this new knowledge and attitude, as well as of their relative frequence, "atypical," "anonymous" or other acid-fast bacilli differing from the typical human type bacillus are being increasingly reported.

A score of different strains of human type tubercle bacilli are now readily distinguishable from the much more common typical variety.[5] All of these have positive reaction to the niacin test of Konno, which appears to be highly specific for human tubercle bacilli but is negative for all the other acid-fast bacilli.[16] In the recent seventh edition of Bergey's "Manual of Determinate Bacteriology," only human type tubercle bacilli are included under the name of mycobacterium tuberculosis.[21] If we accept this nomenclature, the niacin test alone might separate out these organisms which are responsible for more than 95 per cent of all cases of pulmonary tuberculosis.

Many different kinds of mycobacteria besides the human tubercle bacilli, however, such as the bovine type bacillus, mycobacterium luciflavum, avian tubercle bacilli, or the battey type bacilli may cause pulmonary disease indistinguishable from pulmonary tuberculosis due to the human type organisms.[4] The vole bacillus and the numerous varieties associated with extrapulmonary lesions in man and warm and cold blooded animals, may not be implicated in ordinary pulmonary tuberculosis but may not be dismissed as saprophytes or nonpathogens.[2,3] Many of these organisms were seen in earlier years but had been confused with typical tubercle bacilli; others had been considered to be harmless acid-fast saprophytes, more than a dozen different species of which have been recognized. Still others could not have been found with the methods then used.

Special culture media, with the addition of particular adjuvants which have been found important, or the omission of certain substances such as glycerine which inhibit some of these organisms; cultiva-

tion at different temperatures, especially below body temperature: growth at different pH, or under different gaseous tensions; and inoculation into a variety of animal hosts, not previously used, may facilitate the isolation of these organisms.

The differentiation and identification of the various kinds of acid-fast bacilli cannot be done by any single arbitrary criterion. The lesions produced in guinea pigs, rabbits and chickens by the human, bovine and avian type bacilli, respectively, are quite characteristic when present,[22] but lack of virulence of the organisms in these animals by no means excludes the possibility of bacilli which are attenuated in this respect but which may still be pathogenic in man or other animals.

In general, slow-growing acid-fast bacilli which are not pigmented when grown in the dark are likely to be potential or actual pathogens, while fast-growing acid-fast bacilli, especially if nonpathogenic for mice, are usually saprophytes.[8] There are, however, many exceptions. Some rapidly-growing acid-fast bacilli like M. fortuitum, abscessus, and balnei are undoubtedly pathogenic for man; and some slow-growing mycobacteria, like M. orangeun, the orange scotochrome, are undoubtedly saprophytic.

Similarly, absence of orange pigment, a positive reaction to neutral red test[10] and strong cording[18] are useful characteristics of tubercle bacilli. None of these characteristics, however, distinguish all pathogenic from the non-pathogenic forms of mycobacteria.[12] Thus the pathogenic M. fortuitum, M. balnei and M. abscessus are noncorded and are negative by the neutral red test, and the pathogenic M. balnei, M. luciflavum and M. scrofulaceum may produce abundant pigment, while some saprophytes, like M. "radish" may be neutral red positive or corded; and many, like M. smegmatis, are nonpigmented.

Consideration of colonial characteristics, the rate of growth, pigment production in the dark and after exposure to light and pathogenicity for mice and other animals will separate out most of the different strains of mycobacteria.[24] The identity of some cultures, however, may be difficult to establish without more extensive tests, including intensive study of cultural characteristics on a variety of media, the use of bacteriophage and various enzymes and susceptibility tests as well as animal inoculation.

Tubercle bacilli which have become attenuated for guinea pigs may still produce disease in mice and men. The consistent finding, in the discharges and tissues of human patients, of M. luciflavum, of M. fortuitum, of M. ulcerans and of other acid-fast bacilli which also produce progressive disease in experimental animals leaves little doubt of their virulence for man. Many of the lesions in which they are found, as well as those produced in animals, are histologically indistinguishable from those due to typical tubercle bacilli.

In general, the pathogenic varieties of acid-fast bacilli are found in the discharges or lesions of animal or human hosts. Some of them have also been recovered from external sources, such as swimming tank water or surfaces, soil or sewage, or they may exist otherwise free in nature. Some of them found in such places may have been merely deposited there by human or animal hosts. Others may actually multiply freely outside of the body, but the finding of such forms is still quite infrequent.

The truly avirulent saprophytic varieties, on the other hand, may occasionally contaminate human or animal materials, in vivo or after leaving the body, or this may occur in the course of isolation. Much more often and readily, however, they may be found in other places, and this would occur even more often if more bacteriologic studies were made of waters, airs and places.

The number of cases of human disease caused by acid-fast bacilli other than the typical tubercle bacillus and leprosy is still too small, and insufficiently studied, to indicate the epidemiologic properties of the organisms. The differences in incidence in different areas is, however, suggestive of endemic foci of the diseases.[17] Although the mode of transmission and the way they infect man have not been elucidated as yet, their association with human lesions, their bacteriological and pathological characteristics, and the nature of the lesions which they produce in experimental animals emphasize their close similarity to the tubercle bacillus.

The terms used for the designation of a disease are important, not only in identifying the condition and communicating knowledge about it, but also in bringing it under the terms of legislation and other arrangements which may be of practical significance. Acid-fast bacilli recovered from human materials are usually reported as tubercle bacilli by most laboratories, or are disregarded as saprophytes. When identification is attempted, and infection is reported as due to M. luciflavum, M. fortuitum or other less common varieties, the health department may not accept it as a diagnosis of *tuberculosis*. Thus subsidy is not given for the care of the patients and the usual public health measures may not be employed.

If the diagnosis were reported as due to M. tuberculosis of the bovine, avian, luciflavum or fortuitum variety, objection would be raised that the latest standard nomenclature of bacteriology does not recognize such terms, and that only the human bacillus may be called M. tuberculosis. It seems feasible, however, to report them as tubercle bacilli, although not M. tuberculosis, just as Shigella sonnei may be reported as dysentery bacilli but not as S. dysenteriae.

A diagnosis of *tuberculosis* rather than merely *mycobacterial granuloma,* or the euphemism *Koch's infection,* may be of importance both for good or for ill to the individual concerned and to his community. Not only may it facilitate recognition of the nature of the illness by the patient, and thus lead him to accept treatment, but it may entitle him to financial and social benefits, insurance, pensions, veteran's allowances and various official and unofficial services. The institution or community in which a patient lives may also profit not only from recognition of the presence of communicability for which precautions should be taken and are legally enforceable, but also in the receipt of specific state subsidies and other benefits which may depend on this diagnosis. On the other hand the social and financial losses, both to the individual and to the community, from the erroneous imposition of the diagnosis are obvious.

Whenever possible, however, the exact identity and characteristics of the acid-fast bacillus responsible for disease process should be determined. Not only may this help to establish the relationship of the organism to the disease but the clinical behavior and prognosis may vary in lesions due to different organisms. The finding of tubercle bacillus is generally recognized as an urgent indication for a study of all persons with whom the patient has been in contact, not only for the discovery of the possible source of the infection, but also for the discovery of other persons whom the patient may have infected. The finding of atypical acid-fast bacilli requires further study to determine whether these are variant forms of true tubercle bacilli or are other acid-fast bacilli which are also pathogenic, or are harmless saprophytes.

Epidemiologic study of the pathogenic acid-fast bacilli which are not tubercle bacilli is badly needed. The few reports so far available indicate a difference in the incidence of these organisms in different populations, but the exact mode of transmission and the possibility of animal vectors needs further investigation. The finding of M. balnei in skin lesions, for example, indicates specific measures in connection with swimming pools; if M. avium is found, special study of possible swine or fowl vectors is indicated; and if M. orangeun is present, water and other sources of laboratory contamination should be investigated.

The therapeutic implications of the identification of atypical acid-fast bacilli are also important. Not only are many of them resistant to drugs which are active against typical tubercle bacilli, but some of them are highly susceptible to sulfa drugs, to penicillin and to broad spectrum antibiotics which are ineffective against the human type bacillus. The dosages needed to give adequate concentrations of the drugs against these organisms may also differ. Further study of the indications for other medical and surgical measures is needed. Individualization of treatment not only by patient but also by type of infecting organisms is here highly necessary.

As more and more is learned regarding the different kinds of tubercle bacilli and other acid-fast bacilli, greater and greater advances are to be expected in the prevention, diagnosis and treatment of the diseases which they may cause. The added burden on the laboratory in this differentiation may pay high dividends in the control of the granulomatous diseases.

Olive View Sanatorium, Olive View (Bogen).

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The Surgical Treatment of Herpetic Keratitis

MAX FINE, M.D., San Francisco

• At present, corneal transplantation is the only definitive means of controlling or terminating recurrent or chronic herpetic keratitis. Of 48 keratoplastic operations for various forms of corneal herpes, 16 in quiescent cases and 32 in cases of active keratitis, all but three brought about improvement.

Recurrence of keratitis in the graft is particularly likely if the visible lesion is not excised completely and a portion of the graft border lies in contact with diseased tissue.

The mode of action of corneal transplantation in improving herpetic keratitis is not clear but several possibilities have been suggested. At least in chronic stromal herpes the removal of diseased and necrotic tissue appears to be a very important factor.

THE REMARKABLE and menacing change which the clinical course of herpes simplex infections of the cornea has undergone in the past ten or fifteen years makes the therapy of this condition the most important therapeutic problem in ophthalmology today.

This change, as has been pointed out by such authorities as Thygeson,[12] Ormsby,[7] Gunderson (cited by Thygeson[11]) and others, is expressed in the increased number of cases with involvement of both eyes, the increased severity of the disease (leading to stromal necrosis and perforation in many cases), the increased frequency of chronicity and relapse, and probably an overall increase in incidence. Some observers have attributed these changes to a lowered tissue resistance to the virus brought about by the increasing use of corticosteroids. Others have expressed belief that there has been an actual change in the virulence of the herpes simplex virus, possibly associated with the widespread use of antibiotics. There are well documented reports on the occurrence of corneal perforation concomitant with the administration of corticosteroids topically or systemically. There are also cases in which recrudescence of dendritic ulcers appeared following topical steroid therapy of a disciform keratitis or a relatively inactive stromal herpetic keratitis. On the other hand, many more cases of chronic herpetic keratitis have improved after therapy with corticosteroids, and have gone on to healing. In the cases to be reported practically all the patients were treated with topical or systemic steroids under frequent and careful supervision, preparatory to keratoplasty, and in the great majority there was definite lessening of the extent and activity of the lesion, often making it possible to encompass the lesion with a smaller graft than had been anticipated. These were all cases of chronic, recurrent, herpetic keratitis—not cases of acute herpetic keratitis, in which corticosteroids are dangerous as well as ineffective. The exact role of the steroids in this disease, as well as in therapy in general, has yet to be elucidated.

There is now ample evidence that chemotherapy and antibiotics are of no value in the treatment of herpetic keratitis except for controlling the secondary bacterial or fungus infections which often take place in such corneas.

At present there is no evidence that an increase in the circulating antibody titre will prevent recurrences of herpetic keratitis, or conversely, that such recurrences will give rise to an increased antibody titre.[10] It is therefore not likely that we may look to a vaccine or to immune sera for control of this disease. Repeated smallpox vaccination, once widely used, has not been demonstrated to be of value clinically. On experimental and laboratory grounds there is no valid basis for it, inasmuch as an increase of circulating antibody does not prevent or modify the corneal disease. On the other hand, local tissue antibodies are increased by an attack of herpetic keratitis and this increase has been shown experimentally to render the cornea relatively insusceptible to further injury by the virus, at least for a time. This may be of some importance in explaining the effects of corneal transplantation in some cases of chronic or recurrent keratitis, as will be described later.

SURGICAL METHODS OF TREATMENT

Total removal of the infected epithelium in early cases of dendritic keratitis, or other acute forms, while the virus still appears to be limited to the epithelium appears to be the only useful method for this stage of the disease. The use of iodine, acids, alcohol or ether does not seem to add appreciably to the effectiveness of this treatment. The injudicious use of such chemical agents may even aggravate the disease by destroying the tissue-barrier to entrance of organisms into the stroma. The use of heat cautery must certainly be viewed with great caution,

Presented before the Section on Eye at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

From the Division of Ophthalmology, Department of Surgery, Stanford University School of Medicine, San Francisco, and the Veteran's Administration Hospital, San Francisco.

because of the greater tissue destruction. In cases of disciform keratitis or chronic keratitis, either superficial or deep, attempted removal of the diseased overlying epithelium seldom improves the condition and frequently makes matters worse, leaving a denuded ulcer where formerly there was none. In violent cases of dendritic keratoconjunctivitis in which most of the cornea becomes involved, the final result in terms of corneal scarring is often better if no surgical interference is attempted and the disease is permitted to run its acute course while such treatment as may be necessary to combat secondary infection or uveitis is carried on.

It is often forgotton in this era of miracle drugs and devices that a sliding conjunctival flap, or a bridge flap, will frequently lead to healing of a chronic herpetic ulcer. When such a flap is applied, it is advisable to currette away the adjacent diseased epithelium or necrotic base of the ulcer to insure adherence. Such a flap is also indicated in cases in which perforation has occurred, since it is technically difficult to use a corneal graft on the perforated globe. If indicated, the flap may be taken down at a later date and replaced with a corneal graft. Where the cornea has become very thin or a descemetocele has appeared but has not perforated, a corneal graft is preferable.

It has been suggested that the only effective method of controlling the recurrences of herpetic keratitis would be the total removal of the entire cornea.[10] The complications of such treatment are certain to be worse than those of the disease. Nevertheless there are numerous cases of chronic and recurrent keratitis in which partial or subtotal corneal transplantation appears to offer therapeutic advantages.[8,9]

INDICATIONS FOR KERATOPLASTY

It has been found convenient to divide cases of herpetic keratitis in which keratoplasty is indicated into three groups: (1) Those with inactive postherpetic scars, either superficial or stromal, in which transplantation is performed primarily for optical purposes; (2) cases of prolonged recurrent episodes of superficial keratitis either diffuse or circumscribed as in metaherpetic keratitis, or deeper lesions recurring over many months or even years; (3) cases of chronic stromal keratitis which persists over many months, with or without associated uveitis leading frequently to stromal necrosis and perforation. Although, in the first group, operation is thought of as principally for improvement of vision, the increasing frequency of reactivation of apparently quiescent corneal lesions after a period of many years suggests that keratoplasty also may be considered as a prophylactic measure, the probability of recurrence being so great.



Figure 1.—*Upper picture*, healed disciform keratitis with calcareous degeneration. A few vessels enter the opacity from the nasal limbus. Corneal sensitivity was poor. *Lower*, transparent graft one year after operation. A small recurrence of keratitis appeared at the nasal side adjacent to the narrow remnant of the disciform lesion.

EFFECTS OF KERATOPLASTY ON HERPETIC CORNEAL LESIONS

Granted that other methods of treatment are ineffective and that replacement of the diseased tissue is the only method of therapy available at present in cases of severe chronic and recurrent herpes, how does such replacement bring about an arrest of this disastrously destructive and resistant infection? Several possibilities come to mind: The removal of diseased or necrotic tissue or perhaps removal of the infective virus. Or there may be a temporary or permanent reduction in vascularity in the area, which brings about a diminution or inhibition of the allergic reaction. It may be that introduction of fixed antibodies in the donor tissue has beneficial effect. Also to be considered is the possible biological effect of the introduction of new tissue. This concept has been supported particularly by some European investigators, notably Filatov.

MATERIAL OF THIS REPORT

The observations presented in this report are based upon 48 keratoplastic operations on 40 patients with various forms of corneal herpes. Sixteen

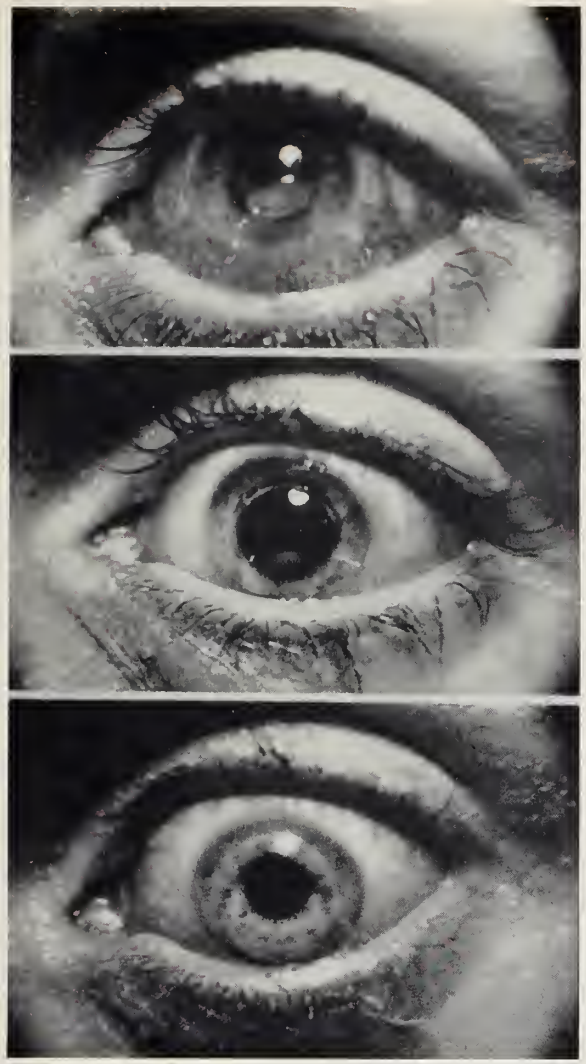


Figure 2.—*Upper,* chronic stromal herpes of six months' duration with large descemetocele and severe iritis. *Middle,* after operation a faint opacity remained beneath the clear lamellar graft. Vision was 20/200. *Lower,* later a penetrating graft replaced the lamellar graft. Vision with correction was 20/30.

of the operations were done primarily for visual reasons. The lesions were healed, inactive, herpetic scars, either diffuse or disciform. In 15 of these 16 cases the operation was penetrating keratoplasty and in one it was lamellar. Thirty-two operations were done primarily for therapeutic reasons, that is, because of chronic or subacute herpetic keratitis which failed to heal over a period of many months, for frequent recurrences of herpetic keratitis or for necrotizing deep keratitis which threatened to perforate. Of these 32 keratoplastic operations, 22 were penetrating and ten lamellar. In many instances, of course, the designation of the transplantation as "optical" or "therapeutic" cannot be made strictly. Often both effects are intended. However, in any case in which keratitis was not completely inactive, or in any case in which frequent recurrences had taken place up to the time of operation, the operation was classified as "therapeutic."

RESULTS

The results in this group of 48 operations confirm the view of earlier observers[6] that corneal transplantation offers the only effective means of treatment at present in cases of recurrent or chronic herpetic keratitis. Even in the presence of active uveitis the operation seems to be relatively safe if proper choice of technique is made. One eye of the 40 operated upon in this series was lost, from an expulsive choroidal hemorrhage. In all but two of the remaining patients there was clinical improvement following corneal transplantation, despite the fact that there was a recurrence of keratitis following nine of the total of 48 operations. The recurrence always appeared first where the visible lesion could not be completely excised and a portion of the graft was in contact with diseased tissue. Clinical improvement may be effected even in the presence of a recurrence in the graft if no other complications appear. In one favorable case of optical keratoplasty in a healed disciform keratitis the recurrence was in the form of a dendritic ulcer, arising first in the recipient cornea and spreading into the graft. This healed without visual impairment. In the other eight the recurrence appeared as an infiltration and vascularization of the stroma near the line of union. It is noteworthy that these nine recurrences were relatively mild as compared with the preexisting keratitis, at least within the period of observation. In no instance was keratitis or uveitis aggravated by the surgical procedure. Particularly striking was the decided improvement in the inflammatory signs following keratoplasty, either lamellar or penetrating, in the patients with deep keratitis and stromal necrosis. This amelioration occurred so promptly and so regularly after operation—within 24 to 48 hours—that there could be no doubt it was a result of the procedure. The cases dealt with herein were of three orders: (1) Postherpetic opacities; (2) prolonged, recurrent, superficial keratitis with ulceration (metaherpetic keratitis) and chronic anterior stromal keratitis; (3) severe chronic stromal keratitis with necrosis.

1. The group of cases of postherpetic opacities was made up of cases in which the keratitis was completely inactive. Some of the opacities were superficial scars either diffuse or central, causing decided visual defect. Others were stromal opacities, usually disciform in type, although in some instances the disciform character of the lesion was obscured by secondary degenerative changes, such

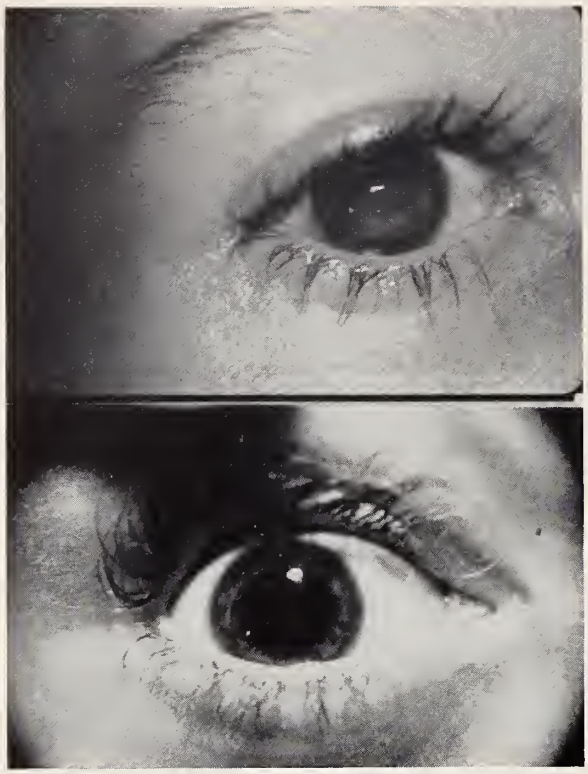


Figure 3.—*Upper picture*, chronic superficial ulceration in a 9-year-old patient following herpetic keratitis at one year of age. *Lower*, clear lamellar graft 8 mm. in diameter. As the cornea was anesthetic, condensation chamber spectacles were worn for protection.



Figure 4.—*Upper picture*, chronic stromal herpes with necrosis and formation of descemetocele. The necrotic portion of the cornea was avascular. *Lower*, an 8 mm. penetrating graft was faintly nebulous but at the time of last observation had remained unchanged for almost three years. There had been no recurrence of herpetic keratitis.

as calcareous or fatty degeneration. Operation in these patients was performed primarily for optical purposes and it was done not less than a year after all activity had ceased. Because the objective in this group of patients was visual improvement, penetrating keratoplasty, which seems to give better visual results in properly selected cases, was carried out in all but one case, regardless of whether the opacity was superficial or stromal. The slightly greater hazard of a penetrating operation seemed warranted when the lesions were inactive. On the other hand, if keratitis is still active or uveitis is present, lamellar keratoplasty is to be preferred whenever feasible. Exceptions to this rule are (a) cases of circumscribed chronic stromal lesion which does not extend to the limbus and can be completely removed by a penetrating graft up to 7 mm. in size, and (b) cases of necrotizing deep keratitis with a prominent descemetocele, making a lamellar graft technically very difficult. Often when lamellar keratoplasty is performed in cases of the latter kind, the descemetocele is ruptured, making accurate coaptation of the lamellar disc difficult. If the lamellar dissection is completed without rupturing the descemetocele, the prominence of the bulge likewise makes it difficult to achieve smooth coaptation of the graft to the underlying recipient cornea.

2. Cases of prolonged recurrent superficial keratitis with ulceration (metaherpetic keratitis) and chronic anterior stromal keratitis are the most common and the most suitable for therapeutic keratoplasty. Usually there is mild vascularization of the cornea, often with only one or two large feeding vessels, which can be coagulated at the time of the keratoplasty to minimize bleeding. In some cases the vascularity is limited to the peripheral cornea, the central portion of the cornea remaining avascular. This situation is encountered particularly in cases of superficial recurrent ulceration (metaherpetic). In the cases of this kind included in the present report the inflammatory signs were for the most part mild, the patient appearing for treatment because of recurring episodes of irritation, pain and moderate congestion. Although mild uveitis frequently accompanied these recurrences, none of the patients had sufficiently severe iritis to cause visible synechias and the pupil could be dilated in all cases.

3. Severe chronic stromal keratitis with necrosis was quite unusual before the past decade. It is now quite common, and Thygeson has pointed out the

possible relationship between the introduction of cortisone therapy and the change in the nature of disciform keratitis from a relatively benign disease to a rapidly progressing necrotizing lesion. The necrosis of the stroma may extend through Descemet's membrane, causing perforation. More frequently the resistant internal elastic membrane remains intact for a longer period and one or more descemetoceles may appear. Severe uveitis is a frequent complication of this deep form of the disease, and hypopyon may occur. Vascularization is usually intense at the periphery of the cornea, but the central portion has few blood vessels, and often the necrosis and the sloughing of the overlying epithelium there leads to secondary infection. In the cases dealt with in this communication, removal of the necrotic corneal tissue by transplantation of cornea appeared to influence the course of the disease very promptly and very favorably. Even in cases in which the transplant did not remain completely clear, the congestion of the globe was greatly relieved, often within a few days after operation, and uveitis subsided.

655 Sutter Street, San Francisco 2.

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Treatment of Itching

A Preliminary Report on Results with a New Oral Antipruritic

CHARLES S. LINCOLN, JR., *M.D.*, RAY C. NORDSTROM, *M.D.*, and ELMER E. BATTS, *M.D.*, Berkeley

• **A new antipruritic, trimeprazine, was used in the treatment of itching associated with a variety of dermatologic disorders in 215 patients.**

Good to excellent relief of itching was experienced by 71 per cent of the patients, fair relief by 15 per cent and poor relief by 14 per cent.

Side effects included mild and transient drowsiness or dizziness that cleared spontaneously; six cases of drowsiness that necessitated discontinuance of the drug; three cases of drowsiness that was controlled by reduction of the dosage; and one case of generalized eruption that cleared upon discontinuance of the drug.

Because the causes of pruritic conditions are so various and because the peripheral and central thresholds for itching differ considerably between persons (and in the same person at different times), the treatment of this symptom is often difficult and discouraging to physicians. Antihistamine and vasodilator agents afford only partial or transient relief and only in selected types of pruritis; and colloid baths and topical lotions and ointments, although widely used, also are unreliable as to result and are inconvenient to use.

The ideal antipruritic agent should be rapid-acting, easy to administer, effective regardless of the cause of pruritis and compatible with treatment directed at the cause of the itching. Moreover, to be ideal, it should not bring about side effects. Trimeprazine (Temaril*), a new phenothiazine derivative possessing central depressant,[5] antihistaminic, and antiserotonin activity,[2] has been reported[1,3,4] to produce clinical results which give some indication that it represents a significant advance toward the ideal. This report summarizes our evaluation of the clinical efficacy and safety of this new drug.

METHOD

During a period of eight months, a series of 215 (80 male, 135 female) private patients were treated for moderate to severe pruritis associated with a variety of acute or chronic skin diseases (Table 1). The patients ranged in age from 30 months to 78 years (average age, 39 years). Doses of trimeprazine were based on the severity of the itching and ranged from 2.5 mg. (one tablet) daily, taken at bedtime, to 10 mg. daily (1 tablet four times a day). The usual dose for children was 2.5 mg. twice a day; for adults, 2.5 mg. three times a day. The last dose of the day was frequently taken at bedtime and, in some patients, was increased to twice the usual dose to control nighttime itching. The duration of treatment ranged from one day (as in urticaria) to eight months (as in senile pruritis). The average duration of treatment was one or two weeks. Since trimeprazine is an antipruritic and has no effect on skin lesions, specific therapy to control the cutaneous disorder was used when necessary. However, no other oral antipruritic agents, such as antihistamines, steroids, tranquilizers or sedatives, were used with trimeprazine. Blood specimens were drawn from 25 patients, taken at random, before and following treatment with the drug to determine the effect of trimeprazine on bloodforming mechanisms. Of the patients selected for this part of the evaluation, 12 had received the drug for one month or less, and 13 for more than a month.

Submitted September 17, 1958.

*T.M. for dl-10-(3-dimethylamino-2-methylpropyl)-phenothiazine tartrate, Smith Kline & French Laboratories, Philadelphia, Penna.

RESULTS

Results were considered *excellent* when the patient reported complete and lasting control of itching; *good* when there was substantial or complete but transient control; *fair* when there was partial and transient control; and *poor* when there was no control. The results reported by the patients were qualified by physical examinations of the patient for signs of scratching such as excoriation, wheals, papules, fissures or crusts.

By these criteria, 42 (20 per cent) of the patients obtained excellent relief; 110 (51 per cent), good relief; 33 (15 per cent), fair relief and 30 (14 per cent, poor relief (Table 1). Control of itching almost always occurred within an hour after the first dose of trimeprazine and was maintained throughout the remainder of the day by subsequent doses of the drug. Itching was effectively controlled throughout the night (the time at which pruritis is usually most pronounced) in most patients who received a single dose of trimeprazine at bedtime.

TABLE 1.—*Results of Use of Trimeprazine for Relief of Itching in 215 Cases of Pruritus of Various Causes*

Diagnosis	Excellent	Good	Fair	Poor	Total
Neurodermatitis	11	19	6	4	40
Contact dermatitis	9	35	9	5	58
Eczematous eruptions	4	19	5	4	32
Pruritis ani, vulvae and scroti	2	11	1		14
Pruritis, idiopathic		4	1		5
Seborrhea	1	1	1	3	6
Seborrheic keratosis		1			1
Psoriasis	1	1	3	2	7
Herpes zoster	1				1
Lichen planus		4			4
Dyshidrosis	4	4	1	3	12
Urticaria	3	3	3	3	12
Xanthomatosis		2			2
Pityriasis rosae	4	3	1	1	9
Dermatophytosis		1	1	1	3
Dermatitis herpetiformis	2	2	1	4	9
Totals	42 (20%)	110 (51%)	33 (15%)	30 (14%)	215

In no case was the drug antagonistic to specific therapy. In patients who had relief of itching, specific therapy was more effective and efficient than is usually the case, since the healing process was not retarded by scratching or irritation of the lesions and adjacent skin areas. In addition, the relief of itching afforded by trimeprazine made it much easier to establish and maintain good patient-physician rapport.

The overall results obtained in the entire group (71 per cent good or excellent) were about the same as those obtained in each of three diagnostic categories within the group that contained enough patients (30 or more) to permit comparisons. In each of these diagnostic categories—neurodermatitis, contact dermatitis and eczematous eruptions—good to excellent results totaled 75 per cent, 76 per cent and 72 per cent respectively. Further clinical studies are required, of course, before it can be determined whether these ratios of results would be duplicated in all dermatologic disorders.

There were no significant changes in the content of leukocytes in the blood or in the leukocyte differential in the 25 patients subjected to hematologic study.

Mild to moderate drowsiness was reported by a significant number of patients. In some patients it was transient; in others, more lasting. In most cases drowsiness was a desirable effect, for it permitted patients to sleep better. We found it necessary, however, to discontinue use of the drug in six patients who complained of drowsiness so pronounced as to interfere with their normal activity. In three other patients, drowsiness was controlled by reducing the dosage.

One patient complained of mild and transient dizziness which disappeared as therapy was continued, and in one other patient a generalized eruption appeared after administration of the drug and subsided upon discontinuance.

COMMENT

Trimeprazine seems to fulfill many although not all of the requirements of an ideal antipruritic. Its specific antipruritic effect relieved itching in over 70 per cent of the patients treated, regardless of the cause of the pruritis. This is, of course, an improvement over the effects ordinarily expected with the antihistamine and vasodilator agents, colloid baths or topical lotions and ointments. While specific therapy was also required, the relief of itching provided by trimeprazine made such therapy more efficient and effective, and greatly reduced the sequelae commonly observed in dermatologic conditions—secondary infections and excoriation.

No lessening of effectiveness of trimeprazine as therapy continued was reported during this study. The convenient dosage form obviated the difficulties associated with the use of topical lotions and ointments, or colloid baths.

The absence of serious side effects, and the negative findings in the small group of patients on whom hematologic studies were done, substantiated other reports[1,3,4] that the drug is safe. Further use of the drug is required, however, to describe its clinical safety more clearly.

2915 Telegraph Avenue, Berkeley 5 (Lincoln).

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Is Suicide Preventable?

RALPH B. ELIAS, M.D., La Jolla

• Among 500 cases of suicide analyzed in Stockholm, fewer than a third were associated with depression. Most forms of psychiatric disease were represented. Nevertheless, most persons give some warning before attempting suicide, and these warnings should be the signal for preventive action. Centers with trained personnel could prevent many suicides, if the potential victims were recognized and referred early enough. Laymen too should be educated to recognize potential suicide and help avert it.

WHEN Rost[4] compiled a bibliography of suicide some 30 years ago it ran to almost 400 pages; since then the literature has at least increased proportionately as studies are contributed from varied perspectives to this most enigmatic of human phenomena.

Recently there have been informed conjectures (Kubie's, for one) that so-called natural death is actually the result of disease. In the present seemingly limitless period of history, it has been postulated that science will be able to eliminate death. It is therefore fitting that we, as physicians, continually reexamine self-produced death and the dis-eases that make it, for the victim, preferable to life.

Although statistics on suicide are particularly unreliable, it can be definitely stated that the incidence currently is not declining. In this country in 1955 the number of deaths attributed to suicide was 16,755—more than from all forms of tuberculosis, from all diseases of the central nervous system except for cerebral vascular accidents, and over twice the number for homicide.

There is evidence that suicide was more prevalent in ancient times.[5,6,7] Mass suicide was more common then than it is today. Yet race suicide is now a possibility.

Should the individual attempt or act of self-destruction be considered a manifestation of psychological disease? Most observers believe so, although there are exceptional situations in which suicide appears admirable if not rational. Most suicides, and especially those within the ken of the physician, are not of this order. They are reactions either patently or implicitly distorted and inappropriate to the circumstances, at least to the observer. They are in essence the final do-it-yourself treatment; the ultimate examples of the cure's being worse than the disease. But the sick individuals cannot understand this at the time.

A psychiatric study was reported by Ettlinger and Flordh[2] of 500 cases of attempted suicide at a general hospital in Stockholm. Five per cent of the patients did not manifest abnormality; the remainder ran the gamut of psychiatric diseases. Neurotic depression in 24 per cent and psychotic depression in 7 per cent accounted for fewer than a third of the cases; it is now well recognized that persons may have neither the clinical nor the dynamic features of depression yet be suicidal, and conversely many depressive patients never attempt suicide.

Nevertheless, a person suffering from depression remains the most dangerous risk. One whom I shall not forget was a woman with an aggravated form of it. She had apparently been doing adequately until her marriage dissolved one year before. Despite most forms of treatment she was in misery much of the time. On her fourth attempt to kill herself, she succeeded. None of these attempts, it should be noted, occurred while she was in a hospital. I believe that if she had been given more security and even less strain than the little she did have, in time she might have recovered. It is wise to reiterate in any clinical discussion that the persons who talk about killing themselves are often the ones who do.

Some of the underlying psychological forces pointed out by various commentators as associated with the act are ambivalence; the triad of the wish to kill, to be killed, and the need to die; a deep feeling of worthlessness; excessive dependency feelings; guilt; rage, either internally or externally directed; the need for atonement and punishment, and an attitude of personal excommunication. Hendin has recently noted the serious portent of fantasies or dreams of fulfillment in death.

Is there anything more that should be done about suicide in this country? Two concomitant approaches are suggested:

The first is the organization of centers, particularly in cities, where trained personnel would provide emergency care and continued treatment of suicidal patients. As previously described, such a unit is part of a general hospital in Stockholm. In Vienna, there is a religious group described by Ringel,[3] its psychiatric director, which devotes itself

Presented before the Section on Psychiatry and Neurology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

to care of those who are tired of life. Social workers, priests and other volunteers participate. Individual psychotherapy is the basic treatment. Ringel's reported results are impressive. In the years 1948 through 1950, 2,879 persons were treated who had made attempts at suicide. By August of 1951, 42 had made another attempt, but only one committed suicide. All patients who were treated before an attempt had not since tried.

The other part of the approach is an extensive educational program, which seems at least as worthwhile as the elaborate campaigns to combat cerebral palsy and muscular dystrophy. But it will not be an easy task to communicate awareness to individuals, their families and neighbors that suicide is practically always the result of illness which can be cured.

Finally, returning to the question, "Is suicide preventable?", it is appropriate to recall an observation by the anthropologist Benedict[1] of the Zuni Indians, among whom sobriety and moderation are valued above all things: "To talk to these people of suicide is to court polite incredulity."

817 Silverado Street, La Jolla.

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Therapeutic Donor Insemination

A Review of 440 Cases

JOHN O. HAMAN, M.D., San Francisco

• **Of 399 patients inseminated therapeutically with the semen of a donor, 303 became pregnant, the great majority of them within six months of the time inseminations were begun. The average number of inseminations was 6.2 and the average number of menstrual cycles over which they were carried out was 3.55. The greatest number of pregnancies occurred between the twelfth and the fifteenth day of the menstrual cycle.**

Seven patients had four pregnancies by this method, 17 had three and 59 had two.

Emotional problems related to children of artificial insemination were far fewer than those associated with adoption.

THERAPEUTIC DONOR INSEMINATION has been practiced in the United States for a relatively short time, although the initial attempt was first made in 1886. The practice is rapidly increasing and being accepted as a therapeutic measure by a larger portion of the population each year.

In approximately one marriage in six (17 per cent) the couple is involuntarily childless, and in these marriages about 10 per cent of the husbands are either absolutely sterile or so nearly so that treatment is hopeless.

The causes of male sterility are numerous—complications arising from venereal disease, glandular dysfunction undiscovered and untreated until puberty, intercurrent infections such as mumps orchitis and tuberculosis, malignant disease, overexposure to x-ray, undescended testicles, untoward results of surgical operation (repair of hernia) and trauma.

The term, *therapeutic donor insemination* was suggested by Dr. Kleegman rather than *artificial insemination* because of the association of the latter term with animal husbandry. The former is in reality the insemination of humans for the cure of sterility. Among the reasons for insemination are azoospermia, severe oligozoospermia, unfavorable congenital qualities, Rh incompatibility and impotency.

Extreme care must be exercised in the choosing of the couples for insemination. The couple must be emotionally stable, must recognize the psychological, emotional and legal consequences that may ensue and also recognize that this is a mutual problem—one that they must face for the remainder of their lives. It is stressed that the potential child should be given the most consideration in this method of reproduction.

For this reason, the couple must live up to certain standards. They must be good "parent material," and not merely seeking a way to "save their marriage."

The entire process must be explained to the couple—the manner in which the donor is selected, his fertility, familial history, physical and mental alertness, the matching of his racial, physical, emotional and blood factors with the corresponding factors in the husband and wife, the anonymity of the donor, the legal status of the child, the manner in which the records are kept in the office, the usual time interval before pregnancy occurs and the probable cost involved.

After it has been determined that the husband is sterile and the mental and psychological make-up of the couple studied carefully by the physician, there should be a "cooling off" period of one to several months before a final decision is made. At no time should the physician "push" or try to "sell" the method to the couple.

If there is doubt in the physician's mind, insemination should not be started or it should be discontinued if this doubt arises later. There are numerous ways in which the physician can postpone or stop the procedure. If any hesitancy develops, the physician can inform the couple that a minor infection has arisen or that a suitable donor is not available, and thereupon discontinue insemination.

After complete explanation, the "cooling off" period having passed and the physician reassured of the stability of the couple and their marriage, a consent is signed by both husband and wife before a witness (the physician's secretary or nurse may serve) and plans laid for insemination.

During this interval, the wife has been studied to be sure that she is capable of carrying a pregnancy safely, that her tubes are open and normal and that ovulation occurs in a majority of her menstrual cycles.

Insemination is usually performed one to three times per month, the timing being based on past menstrual records, on basal body temperature readings and on the character of the cervical mucus.

Presented before a Joint Meeting of the Sections on Urology and Anesthesiology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

METHOD

The method of insemination is simple. The patient is placed in lithotomy position on the examining table and the vagina and cervix are wiped dry with cotton. The cervical mucus is studied for signs of ovulation, and the amount and character of the mucus is observed—for the presence or absence of pus, for Spinbarkeit, fern formation and presence of glucose. Occasionally a study of vaginal smears is done if the patient's periods are too irregular.

Semen from the donor is placed in a plastic cup* (first used by Whitelaw)[9] and inserted into the vagina and over the cervix, where suction holds it in place. Care must be taken that none of the semen is spilled during the insertion. The cup is slipped along the posterior wall of the vagina in a horizontal position, dome down, until the cervix is reached, when a slight downward pressure permits the cup to slip over the cervix. In this manner, the cervix is constantly bathed in the entire undiluted specimen of semen, which is left in place for 24 to 48 hours and then removed either by the physician or the patient. If the cup is removed in the office, examination of the cervical mucus usually will reveal myriads of active sperm (if the insemination was performed at the time of ovulation) even though 48 hours have elapsed since the insertion of the cup. No preservative or antibiotic such as penicillin is added. Ovulation is considered to occur between the low point of the basal temperature and the beginning of the first sustained rise which follows.

RESULTS

The present series included 440 women, 41 of whom were still under treatment at the time of this report. Of the remaining 399 patients, 303 became pregnant (75.94 per cent) and 216 delivered 220 normal live infants. There were 67 miscarriages (22.11 per cent), which was somewhat higher than the proportion of spontaneous miscarriages reported by Malpes (18 per cent),[7] Mall (20 per cent),[6] Whitehouse (17.6 per cent),[8] Brunner and Newton (15.8 per cent),[1] Cary (10.6 per cent)[2] and Kleegman (20.2 per cent).[5] Twenty patients were still pregnant at the time of report, two were lost track of and 96 (24 per cent) patients terminated treatment for one reason or another.

In the 303 cases in which pregnancy occurred, the total number of inseminations performed on the day of ovulation was 700, or 43.2 pregnancies per 100 inseminations. This compares with my previous report[3] of conception in 23.7 per cent of inseminations on the day of ovulation. The improvement is probably due to improved methods of detecting ovulation, which may cast some light on why conception often does not occur from the copulation of normal fertile couples at what they believe is the time of ovulation.

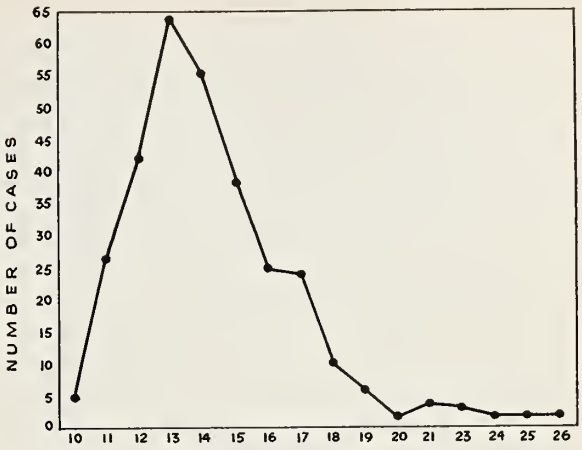


Chart 1.—The numerals across the chart designate the day of the menstrual cycle on which fruitful insemination was done.

In this series the average number of inseminations per pregnancy was 6.2, and the average number of menstrual cycles that took place before pregnancy was obtained was 3.55. Pregnancy followed insemination in a single cycle in 91 cases (30.1 per cent), in two cycles in 53 cases (17.5 per cent) and in the third cycle in 55 cases (18.21 per cent). Thus 65.67 per cent of the women became pregnant in the first three cycles of insemination. Another 66 women became pregnant in the next three cycles, a total of 265 (87.4 per cent) achieving their goal within a six month period.

Of the 220 children born, 117 (53.6 per cent) were male, 101 (46.3 per cent) were female and the sex of two is unknown. There were four sets of twins (one set of identical males, one set of identical females and two sets of mixed sex). There were only five abnormalities among the children: One had a minimal hairlip, one was jaundiced, one was born with a malformation of the hand and two with hemangiomic birthmarks (both of these being of the same mother and the same donor).

Fruitful inseminations varied from the 10th to the 26th day of the cycle, with the great majority (65.31 per cent) occurring between days 12 and 15 (Chart 1).

A total of 95 donors were used—some only once or twice, others more frequently. Semen from 40 of them did not impregnate any of the potentially fertile women in the series, even though all donors were considered to be normal fertile males by present standards.

*Manufactured by Ortho Research Foundation and Milex-Fertilex Co.

DISCUSSION

The possibility of a donor's children meeting and marrying has been frequently mentioned. In this regard it may be noted that in the present series only 57 per cent of the pregnancies occurred in patients who lived within a radius of 50 miles of San Francisco, an area having a population of approximately three million people; and the remainder were scattered over a wide area. Hence the chances of unwitting incest would seem very remote.

There have been no complications related to the insemination technique since the use of the plastic cup was begun in 1948. Previously, when the semen was placed in the vagina or into the cervical canal, there were five cases of complications—acute pelvic inflammatory disease or transient endometritis.

Not all the 96 cases in which conception did not occur should be counted as failures. Twelve patients became discouraged after one cycle, 15 after two cycles and another 15 after three cycles—making a total of 42 (43.6 per cent) who stopped at or before the third month. It is probable that if these patients had continued, a large majority would have become pregnant. Another 25 stopped in the next three months. Only four patients continued inseminations longer than a year. The reasons given for termination of treatment included moving to another locality, adoption of a child, religious canons, financial straits, discouragement, divorce and emotional factors.

PARENTAL ATTITUDE

Follow-up information of some kind was obtained on 216 patients who were delivered of full term babies. These follow-ups consisted of letters from the patients, Christmas cards and pictures of the parents and children, office visits where the children were "shown off" or visits to plan for future inseminations. Letters that arrive from time to time are full of appreciation, pride and joy in the child or children, some of whom are now 13 years old.

Seven patients have had four pregnancies by donor insemination, 17 have had three and 59 have had two. From the survey of the follow-up data plus the fact that 83 women have returned for additional inseminations, there is good evidence that therapeutic insemination has been readily accepted and psychologically successful. The child is a child of the family, not alone of the wife. Emotional problems so often associated with adoption have been few. The husband identifies the children as part of his wife and gives them parental love and affection. In fact, it is usually the husband who first broaches the subject of more children by this method. Of the couples who remained in the author's ken, only three are known to have had marital difficulties in the ensuing years, none of them directly influenced by the inseminations.

LEGAL NOTES

No state, province or federal government has any law directed toward the regulation of therapeutic donor insemination. There have been few court cases regarding the legality of the procedure—whether there is any criminal culpability on the part of the physician, the wife or the donor, the legitimacy of the child or the questions of inheritance, custody, support and education of the offspring.[4]

Seven cases dealing with donor insemination have come to trial—one Canadian, two English and four American. The foreign cases have no direct bearing on therapeutic insemination. In the first American case (Hoch vs. Hoch)* the court stated that artificial insemination with the semen of a donor is not adultery. In the case of Strnad vs. Strnad,* the court said that "assuming again that the plaintiff was artificially inseminated with the consent of the defendant, this child is not an illegitimate child." In the case of Ohlson vs. Ohlson,† the ruling was that "when a child is born within a marriage, by whatever method, there is legal presumption that both marriage partners are its parents." In still another decision (Doornbos vs. Doornbos*) however, the court ruled that artificial insemination with donor semen constituted adultery on the part of the mother and that the child was illegitimate. All the foregoing decisions were rendered by lower courts, hence were simply one trial judge's opinion and not firmly established as precedent.

Many of the problems that have been discussed at various times are disposed of by statutes which cover this subject quite adequately even though never intended to apply to donor insemination. Rather summary disposition can be given to the questions of both civil and criminal adultery, failure to support the child and the legitimacy and inheritance of a child who comes under the indisputable presumption of Section 1912 of the California Code of Civil Procedure. In fact, if the husband is not impotent and is cohabiting with his wife, it is difficult to find a problem not settled by this indisputable presumption.

Bills legitimatizing the children conceived by therapeutic insemination and giving them the right of inheritance, maintenance and support have been introduced into several state legislatures, but as yet

*58 Yale Law Rev., 457-460, 1949. Case Strnad vs. Strnad, 78 N. Y. Supplement 2nd, page 390, 190 Misc., 786 (Sup. Ct. N.Y., 1948). Case Doornbos vs. Doornbos, 111 Sup. Ct. No. 54 S, 14981.

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none has passed. There should be a well organized campaign for the dissemination of correct information as to the benefits of the treatment, for the respectful avoidance of practices contrary to religious tenets and for intellectual and dignified countering of sensationalistic discussions of the subject.

490 Post Street, San Francisco 2.

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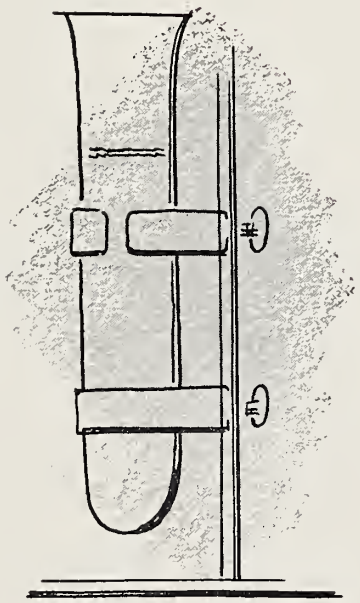
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Diagnosis and Treatment of Joint Tuberculosis

RAYMOND M. WALLERIUS, *M.D.*, Sacramento

• **Tuberculosis of the joints is not a clinical oddity and a diagnosis of tuberculous infection must be considered in all joint lesions if diagnosis is to be made early. A history of insidious onset of pain, especially if accompanied by pulmonary symptoms or a history of contact with a tuberculous person, should alert the clinician to the possibility of this diagnosis. The tuberculin test, roentgenograms, culture of aspirated fluids and biopsy, by anthrotomy or punch, continue to be the standard procedures for establishing the diagnosis. The differential diagnosis must include the entire gamut of bone and joint disease.**

Chemotherapy combining streptomycin and dihydrostreptomycin with isonicotinic acid hydrazid and para-aminosalicylic acid is of extreme value in the eradication of draining sinuses and in the advancement of the ideal surgical date; but general physical and mental hygiene, rest and the prevention or correction of deformities is a continuing therapeutic necessity. Fusion of the affected area is advocated in almost all lesions although there is some hope that functioning joints may be preserved with early diagnosis, conservative surgical treatment and more efficient antibiotics. A postoperative regime similar to the preoperative treatment must be continued until the stabilization is firm or until there is no evidence of activity.

SINCE TUBERCULOSIS OF THE JOINTS is not a rarity, every joint lesion in which the diagnosis is obscure must be considered tuberculous until a definite diagnosis is established. It is only by awareness of the probability of such infection that early recognition, with the advantage of early treatment, is possible. There has been little decline in the incidence of pulmonary tuberculosis and it is probable that there has been little lessening in the number of cases of dissemination to joints. In the ten-year period between the beginning of 1948 and the end of 1957, almost six thousand patients with a presumptive diagnosis of tuberculosis were admitted to the Weimar Chest Center at Weimar, California. Approximately 1 per cent of these persons had joint lesions or such lesions developed. While absolute data are not available there did not seem to be an appreciable difference in proportional incidence in men, women and children.

It is generally agreed that the tubercle bacillus enters bone or synovia through dissemination by the blood stream from a primary visceral focus. In the cases studied the primary focus was pulmonary and no bovine type infections were found. A very high proportion of the patients had active pulmonary tuberculosis and it appeared that most of these patients had had pulmonary symptoms for varying periods before the appearance of joint difficulty. The stage of the primary lesion did not seem to be related to the joint disease. In no case could it be established that trauma was an etiological factor, but in a very small number symptoms were first evident following trauma. In these cases it was obvious from the progression of the disease that the infection had been present before the injury and there was no specific evidence that the injury had aggravated it. The theory of microtrauma as an etiological factor in the localization of the disease cannot be entirely dismissed in view of the frequency of localization in the spine, hip and knee.

The diagnosis of tuberculosis of joints is the greatest of problems and there is little new in the diagnostic armamentarium. A history of an established diagnosis of pulmonary tuberculosis or of a contact coupled with symptoms referable to the joints is reason for suspicion and for continuing diagnostic procedures. The tuberculin test of Mantoux is very valuable and, while it must be admitted that a negative result does not exclude joint involvement, it does throw considered doubt on the possibility of such a diagnosis. Conversely a positive reaction does not lead to a positive conclusion. Analysis of fluids obtained from infected joints or communicating abscesses by culture or guinea pig inoculation, or both, and biopsy of material within a focus are the only means of establishing a positive diagnosis. Punch biopsy is a valuable diagnostic aid, economically and medically. Enough material for adequate study may be taken from the lower spine and the superficial joints by means of a punch. However, negative findings are inconclusive.

Roentgenograms are a necessity in determining the location and extent of the lesion, but are of very little help in early diagnosis. The often described roentgenographic evidence of demineralization about a focus is of little diagnostic importance and reflects a physiological phenomenon discernible only to the well trained eye. Roentgenographic evidence of fluid within a joint is usually a confirmation of a previ-

Presented before the Section on Orthopedics at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

ously discovered clinical observation. Findings typical of a "cold abscess" associated with a destructive joint lesion are almost diagnostic, but they are not seen early. In the spine it is usual to find destruction of the anterior bony cortex of a vertebral body near a disc, usually associated with some obliteration of the disc space and, very often, involvement of the apposing vertebral body. It is not too uncommon to see evidence of involvement in two apparently unconnected areas, with apparently normal vertebrae between. In other joints some destruction of the joint cartilage and articular plate associated with synovial thickening are typical of the x-ray picture. It must be emphasized that these are moderately late stages but, from an x-ray standpoint, are almost the first to be of diagnostic value.

Correlation of all the studies is of primary importance in attempting to establish a diagnosis. It is by adding to the history and the physical examination the relative values of the tuberculin test, the bacteriological and pathological analysis and the interpretation of the x-ray studies that a definite conclusion can be reached. Isolation of the bacillus of tuberculosis is, of course, diagnostic, but is of less value than other factors in helping to outline a course of treatment and in throwing some light on the prognosis.

The entire gamut of bone and joint disease must be considered in the differential diagnosis. The osteochondritides may show certain features on examination and on the x-ray film which could be confused with tuberculous infection. Similarly, differentiating early osteochondritis desiccans and osteochondromatosis may present some problem. A normal blood picture, absence of inflammatory change and absence of signs and symptoms of a primary pulmonary focus are sufficient to distinguish between the infectious and noninfectious process. Some benign bone or synovial tumors resemble tuberculous foci but x-ray findings are usually sufficient to differentiate between the conditions. Biopsy, if necessary, is the final diagnostic procedure. Acute infections in or near a joint do not present a difficult problem. The sudden onset and the well known symptoms and physical characteristics direct the clinician toward the proper classification. Metastatic tumors and various primary bone tumors, however, may be confusing factors, especially if there is a known pulmonary infection. Metastatic tumor of the osteolytic type, where the primary lesion is not demonstrated, may be suggested by the age of the patient and the x-ray appearance of a bone destructive lesion without surrounding localized demineralization. Serial x-rays films are most informative in such circumstances, for the progress of metastatic osteolytic tumor is much more rapid than is that of tuberculosis of the joint. For the author, primary tumors of bone have been the most difficult to differentiate from tuberculous lesions. In one case a multiple myeloma of the spine in an elderly person was thought to be a metastatic carcinoma, with the possibility of a tuberculous spondylitis, as there was active pulmonary disease. The diagnosis was established at autopsy. In another case a Ewing's sarcoma of the ilium in a child was near the sacro-iliac joint and the possibility of a tuberculous infection was considered. In this young patient the negative tuberculin reaction and the x-ray appearance of some bony proliferation suggested the proper diagnosis, which was confirmed by biopsy.

TREATMENT

The technique of treatment will vary with each patient. The general therapeutic aim is to effect an arrest in the shortest possible time; but time is not the primary consideration and haste should be made slowly. The general condition of the patient, the state of the primary infection and the phase of the local infection are the deciding factors in the therapeutic time table. The established principles of general physical and mental hygiene, rest and the prevention or correction of deformities are as important today as they were before the introduction of chemotherapy. During the acute phase, rest by immobilization must be adequate and continuous. Putting on a well-fitting plaster cast is still the best way to immobilize the extremities. A revolving bed is superior to a plaster shell or a Bradford frame for immobilization of the spine and is ideal for children before and after operation. Deformities are not serious problems and are usually confined to the lower extremities. Light traction for flexion deformities of the hips and knees is almost universally successful and should be continued until complete correction is obtained. No attempt should be made to correct the kyphosis or minor scoliosis so often present in spondylitis, lest the physiological barriers to the spread of infection be broken down and general or local budding take place as a result. The kyphos of the average patient is not disfiguring and is reduced by removal of the spinous processes at the time of fusion.

The greatest advances in treatment followed the introduction of chemotherapy, which not only led to changes in the treatment of the pulmonary disease, but brought more rapid improvement in the general well-being of the patient. Also it made possible more adequate treatment by pulmonary operation and in general shortened the period of activity of the pulmonary disease. It was, of course, of equal orthopedic value through its effect on tuberculosis of the joints, where it reduced the active phase, had beneficial effect on draining sinuses and thus permitted earlier definitive operation. It was recognized

early that drug therapy had a very definite effect on the previously feared, and often fatal, lesions that were complicated by draining sinuses which, more frequently than not, were secondarily infected. With drug therapy the sinuses ceased to drain, healed and stayed closed.

With the ameliorating effect of chemotherapy, neither aspiration nor incision of an abscess is a dangerous procedure. Incision and drainage has certain advantages over aspiration and does not add to morbidity. Certainly an abscess that seems about to rupture must be drained by surgical means. Excision of abscesses in the paravertebral region has been advocated by various investigators. The author has seen no cases in which this procedure seemed indicated and has had no experience with it. The operation cannot remove the focus of infection and is not without surgical risk. The accumulated experience with the procedure and the length of observation of results are insufficient to permit definite conclusions. Earlier diagnosis and more adequate early treatment should result in a decrease in lesions requiring such treatment.

The effectiveness of drug therapy is dependent on the use of a drug or a combination of drugs which will destroy the pathogens, without leaving resistant strains, yet have the least toxic side effects. Experience at the Weimar Chest Center has led to the conclusion that resistance is slow to appear when treatment combining streptomycin and dihydrostreptomycin with isonicotinic acid hydrazid and para-aminosalicylic acid is used. Also the toxic effect is less than with some of the other drugs suggested for long term treatment. The combined therapy is used in all cases in which joint tuberculosis is suspected and is almost always begun before the diagnosis of the joint lesion is established. It is continued through and after operation until the desired result of the operative procedure is obtained. Continued use after a fusion is solid is not considered necessary except as it may be indicated for disease elsewhere. The dosage for adults has been standardized as follows: Streptomycin and dihydrostreptomycin, 1 gm. parenterally every other day; isonicotinic acid hydrazid, 300 mg. daily by mouth; para-aminosalicylic acid, 12 gm. daily by mouth. For children the dosage of mixed streptomycin and dihydrostreptomycin is computed on the basis of 40 mg. per kilogram of body weight, every other day; and the daily amount of isonicotinic acid hydrazid is 5 mg. per kilogram and of para-aminosalicylic acid, 25 mg. per kilogram of body weight.

In the light of present knowledge is cannot be proved that a functioning joint is a safe joint. Hence, ankylosis of the affected area is the treatment of choice. Resection of nonweight bearing joints has been advocated in selected cases but it is impossible to remove all infected material and there is no assurance that there will not be a later recurrence. The possibility of partial synovectomy when tuberculous infection is confined to the synovium is being explored and does offer some hope if the diagnosis is made very early, before there is cartilage or bone destruction. It is possible that with greater diagnostic acuity, salvage will increase. The development of more efficient antibiotics will also play a part in achieving that goal.

Except for the occasional clinical rarity, stabilization must be the ultimate objective of treatment, and it is of little moment what method is used. Preferably the operation should not be done until the primary focus is in the tertiary period and the local lesion has reached a chronic state. There is no reason to avoid intraarticular operations in the joints of the extremities, and they are often superior to attempts at extraarticular fusion. The approach is more positive, the articular debris may be evacuated and a solid fusion is more probable.

In fusion of the knee it is common to open into rather large abscess cavities but these wounds heal readily and present no profound postoperative problems. In fusion of the spine, seldom is purulent material encountered when the posterior approach is used; but even if an abscess is opened, it is to be expected the wound will heal per primum. In almost all hospitals dealing with tuberculous patients a store of resected ribs is available, and they are very useful in augmenting arthrodesis. Using bone from this supply is of major importance in children, for removing enough bone from the pelvis of the patient for this purpose might be difficult or might cause pelvic deformity. In spinal fusions, small fragments of the ribs are used to supplement the usual fusion bed. In joints of the extremities, larger fragments bridging across the joints add stability and supply a framework for bone formation by creeping substitution. The possibility of cross infection by the use of infected bone must be considered, but there has been no evidence of this in the cases so treated. From a medico-legal standpoint such bone, if preserved and stored under the usual prevailing methods, should never be used in a nontuberculous patient.

There is some controversy as to how old a child should be before fusion is attempted. It is rather universally accepted that a spinal fusion may be done at any age and will not materially influence growth or cause the production of deformities. As to the joints of the extremities, no hard and fast rules are available. The problem of growth following arthrodesis and the difficulties of obtaining a firm fixation must be considered individually. It is believed that operative intervention around an epi-

physis will cause little or no more shortening of an extremity than will the destruction of the disease with the concomitant loss of use. If a generality is permissible relative to the age at which fusion of joints of the extremities should be done, it would be as soon as it appears probable that firm fixation is attainable. The ideal positions for fixed joints are well known. The position should be suited to the individual patient.

Postoperative care is, in essence, a return to the treatment used before operation and must be continued until there is positive evidence of firm bony ankylosis. Chemotherapy should be continued and the joint held rigidly immobile. Roentgenograms made at regular intervals are the deciding factor in determining the degree of bony union and the activity of the lesion. Continued activity is conclusive evidence that the fusion is not solid. This evidence is of great value in dealing with lesions in the thoracic spine, for it is difficult there to determine the solidity of the fixing mass. Chemotherapy should be continued as long as there is evidence of activity. For a period of at least two years after operation, roentgenograms should be made every six months to determine stability or activity.

2909 J Street, Sacramento 16.

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Psychotherapy of Alcoholics

The Concept of Psychotherapeutic Motivation

KEITH S. DITMAN, *M.D.*, ALLEN J. ENELOW, *M.D.*, and CRAIG MacANDREW, *Ph.D.*, Los Angeles

• **The psychiatric patient's compliance with requirements of therapy (attendance, responsiveness, verbalization, etc.) often is adopted by the therapist as the chief criterion of motivation for cure. By these standards alcoholics often are judged to be poorly motivated and unsuited to the therapist's mode of therapy. In such cases, the method may have to be adapted to the case, and a more permissive attitude taken toward the patient's apparent noncooperation.**

CERTAIN KINDS of behavior in psychiatric patients lead to a better outcome of treatment than certain other kinds of behavior. For instance, a patient who comes to most of his appointments on time, speaks readily and verbalizes his inner experience easily is considered a well-motivated patient. On the other hand, a patient who misses appointments, comes late or does not speak is considered poorly motivated. In other words, the patient's compliance with the requirements of therapy is used to define his motivation. If he does not or cannot do what the "rules of the game" of the therapy demand, his motivation is considered to be poor. This of course does not imply that a patient who is able to follow the requirements of treatment is certain to be successfully treated, or that all unsuccessful treatments can be explained in terms of the patient's inability in this regard. Nor does it imply that no patients who are considered on these grounds to be poorly motivated are ever successfully treated. But, by and large, that behavior which is termed poorly motivated by this definition correlates highly with unsuccessful results from psychotherapy.

How well motivated are alcoholics by this standard? Hayman's 1955 survey of the membership of the Southern California Psychiatric Society indicated that most psychiatrists questioned preferred not to treat alcoholics, as they considered them "too poorly motivated" to benefit from psychotherapy. These psychiatrists felt so strongly about this that 44 per cent of them reported that they did not take alcoholics into treatment at all. And indeed the behavior of alcoholic patients in treatment is frequently not such as to meet the requirements of therapy. They frequently miss appointments and very often stop treatment soon after beginning. It is not uncommon for alcoholic patients to come to their appointments drunk. Frequently they get into trouble, lose jobs or are jailed, and as a result do not continue with regular appointments. Under the conditions of therapy usually employed, such conduct is considered evidence of poor motivation.

When a patient is imputed to have poor motivation, the evaluating therapist may well be saying—among other things—"This patient's behavior is not what my method of therapy requires." In this connection, it might be well to ponder the methodological truism that the problem (in this case the nature of the patient) should determine the method.

As a logical exercise, let us consider how the kind of behavior that is regarded as evidence of poor motivation could be evaluated differently. Logically, the less that is required of the patient, the fewer would be the kinds of behavior that could be viewed as disruptive or incompatible with treatment. The ultimate, then, would be to dispense with all behavioral requirements from the patient except his physical presence. Such psychotherapy would look quite different from anything we now generally practice. For example, the patient would no longer be required to speak, and if he did choose to speak the manifest content of his verbal communications would be solely up to him. When such freedom or seeming anarchy is allowed, as the authors have done experimentally, a different attitude prevails. The only behavior which can be considered in opposition to operative behavioral proscription is the patient's failure to come to treatment at all!

From the Alcoholism Research Clinic, Department of Psychiatry, UCLA Medical Center, Los Angeles 24.

(The Alcoholism Research Clinic is supported by a grant from the Division of Alcoholic Rehabilitation, State of California Department of Public Health.)

Presented before the Section on Psychiatry and Neurology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

University of California at Los Angeles School of Medicine, Los Angeles 24 (Ditman).

Radiographic Signs of Acute Suppurative Cholecystitis

JAMES J. McCORT, M.D., San Jose

• In a recent series of 26 pathologically proven cases of acute cholecystitis, preoperative radiographic examination of the abdomen confirmed the presence of an inflammatory process in 17.

The radiographic signs associated with acute suppurative cholecystitis are:

1. Enlargement of the gallbladder, as indicated by separation or alteration in position of opaque calculi or indentation of adjacent bowel.

2. Localized peritoneal irritation, manifested by (a) ileus of hepatic flexure of colon; (b) ileus of duodenal loop; (c) effacement of haustra of the hepatic flexure or valvulae conniventes of the duodenum; (d) obscuration of fat line marking inferior border of liver.

3. Cholecystitis emphysematosa.

4. Perforation of gallbladder, which if localized (retroperitoneal) is manifested by bubbles of gas in the gallbladder bed. If generalized (intraperitoneal) the signs are adynamic ileus of small and large bowel, increased intraperitoneal fluid, subdiaphragmatic abscess and plate atelectasis of right lung base.

Visualization of the gallbladder and biliary tree after intravenous cholecystography rarely occurred in the presence of acute cholecystitis.

Plain film examination of the abdomen aids in establishing the diagnosis of an acute cholecstitis and leads to the early recognition of complications such as perforation and peritonitis.

THE CLINICAL FINDINGS in acute cholecystitis are well known and when they follow the classical pattern the diagnosis is readily made. When the symptoms or signs are atypical, the plain film radiographic examination is helpful. In a few instances the radiographically shown complications of acute cholecystitis make operation imperative.

In a 12-month period, 35 patients were admitted to the Santa Clara County Hospital with symptoms and signs of acute cholecystitis. Twenty-six of them had preoperative roentgenograms and in 17 of the 26 confirmatory evidence of an acute inflammatory process in the gallbladder was found.

Pathologic Features

The pathologic sequence of acute inflammatory changes in the gallbladder is initiated by stasis or obstruction. Occlusion of the cystic duct by stone or inflammatory exudate results in the retention of bile and produces a tense, swollen gallbladder.[3] Bacterial infection is soon superimposed and if drainage does not occur spontaneously the infection will extend through the wall of the gallbladder. At this point there is swelling and edema of contiguous structures. The gallbladder wall will undergo necrosis and perforation follows, first with localized and later with generalized peritonitis.

Technique of Examination

The roentgen diagnosis of acute inflammatory processes within the abdomen has been described in the past by Laurell,[6] Friman-Dahl[4] and Young.[14] The diagnostic value of preliminary plain film examination is well proven. For this reason patients admitted to the Santa Clara County Hospital with signs and symptoms indicating infection or tumefaction in the abdomen are routinely examined radiographically. Three films of the abdomen are taken: (1) An anteroposterior in the supine position, (2) a posteroanterior in the upright position (if the patient is able to cooperate; otherwise, prone), and (3) a left lateral decubitus film. Serial abdominal films are taken when the diagnosis remains in doubt.

How the patient is dealt with then depends on analysis of these three films and a correlation with the clinical findings. A patient with a perforated viscus is prepared for immediate operation. If urinary abnormalities are present, an intravenous urogram is carried out. When there is indication of large bowel obstruction, the colon is studied by barium enema. If small bowel obstruction is indicated, the patient is given 100 cc. of 25 per cent Hypaque® solution, or 3 ounces of barium mixture, by nasogastric tube and hourly films are taken.

When disease of the gallbladder is suspected, an intravenous cholecystogram is obtained. In the present series, visualization of the gallbladder or the bile ducts occurred only once in the presence of acute inflammation. Thus, visualization of the gallbladder seems strong evidence against acute cholecystitis, although it does not exclude that diagnosis.

Radiographic Signs

An acutely inflamed and obstructed gallbladder tends to increase in size. (Ordinarily the gallbladder

Presented before the Section on Radiology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.



Figure 1.—*Enlargement of gallbladder shown by widely separated stones.* The patient, a 54-year-old woman, had had abdominal pain for a week and jaundice for four days. A mass was palpable in the right upper quadrant of the abdomen, and results of laboratory tests were indicative of extrahepatic biliary obstruction. A preliminary film of the abdomen showed the liver edge to be low in position. There was a smoothly rounded mass in the right abdomen lying over the sacroiliac joint (black arrows). It contained widely separated stones. These observations were compatible with a distention of the gallbladder. The larger calcification superior to the mass as well as the two clusters of three calcifications close to the midline (white arrows) were identified at operation as being in the omentum.

At operation the liver was observed to extend 7.5 cm. below the right costal margin and was somewhat nodular. The gallbladder was about three times normal size and contained many small stones. Pronounced edema and inflammation was noted about the common duct, cystic duct and Hartmann's pouch. The head of the pancreas was indurated and there was amorphous material in the common duct. Microscopic study of the gallbladder showed acute and chronic cholecystitis with cholelithiasis.



Figure 2.—*Indentation and downward displacement of the colon by an enlarged gallbladder.* On the morning of admission the patient, a 72-year-old white man, had nonradiating epigastric pain. The abdomen was flat. Rigidity and tenderness to palpation was noted in the right upper quadrant. Leukocytes numbered 10,500 per cu. mm., 80 per cent segmented forms. A film of the abdomen taken after admission showed the hepatic flexure and transverse colon to be filled with gas. The hepatic flexure was displaced downward and its superior margin was indented by the dilated gallbladder (black arrows). Further, the margins of the colon which are in contact with the gallbladder are rendered indistinct by the associated inflammatory process.

At operation the gallbladder was found to be extremely enlarged, thick-walled, inflamed and distended. Surrounding it were a moderate number of omental adhesions. The gallbladder was removed and upon microscopic examination the wall was observed to be greatly thickened and edematous. Recovery was uneventful.

cannot be delineated radiographically from the surrounding soft tissue structures because it is of identical density.) If it contains radiopaque stones, it is readily identified. Wide separation of gallstones or a decided alteration in position of stones between the prone and upright films indicates the gallbladder is distended with fluid (Figure 1). Unfortunately, less than one-fifth of gallbladder stones contain enough calcium to be visualized on a plain film.[14]

The enlarged gallbladder may make itself evident by indenting or displacing the adjacent bowel loop (Figure 2).[12] These loops are usually distended with gas (as in Figure 2), causing the "pelotte-effect" described by Friman-Dahl.[5] Careful inspection is necessary to distinguish the distended gallbladder from the lower pole of the right kidney.

Localized peritoneal irritation will result in ileus of the adjacent bowel.[7] This is most common in the hepatic flexure of the colon (Figure 3). It is necessary to differentiate this dilated and atonic hepatic flexure from the chance occurrence of localized flatus. Placing the patient in a decubitus or upright position will usually cause flatus to pass along the colon. An atonic segment will remain dilated.

The next most common site of ileus, in the present series, was the second portion of the duodenum. Because of its close anatomical relationship to the gallbladder and its attachment to the liver by the hepatoduodenal ligament, it is easily subjected to irritation (Figure 4).

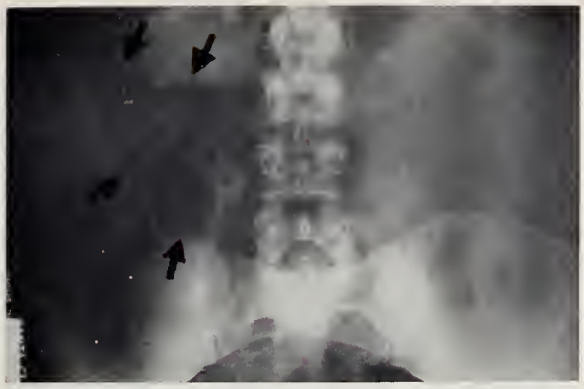


Figure 3.—*Ileus of hepatic flexure.* The patient was a white woman 30 years of age who entered the hospital with a history of stabbing pain in the right upper quadrant of the abdomen following the ingestion of fatty foods. Nausea and vomiting were present. On the third hospital day the temperature reached 104°F. and leukocytes numbered 11,400 per cu. mm. A plain film of the abdomen showed a localized ileus of the hepatic flexure (arrows). The liver edge was obscured.

At operation the gallbladder was seen to be red, edematous and thickened. It was full of pus and contained 12 stones. Edema extended down to and included the hepatoduodenal ligament.



Figure 4.—*Dilatation of the duodenum due to acute cholecystitis.* The patient was a 23-year-old woman who was admitted with localized and progressively severe epigastric pain which had begun some 12 hours earlier, shortly after a breakfast consisting of bacon and fried eggs. Bowel sounds were hypoactive and there was very pronounced tenderness in the right upper quadrant of the abdomen, associated with a questionable mass. The film of the abdomen showed pronounced dilatation of the second portion of the duodenum (black arrows). The lateral aspect of the duodenum was indented by the enlarged gallbladder and the margin of the duodenal wall in contact with the gallbladder was rendered indistinct by the associated inflammatory reaction.

At operation the cholecystoduodenal ligament and the gastrocolic ligament were observed to be thickened with edema and inflammatory reaction. The gallbladder was distended to approximately twice normal size and showed an early necrotic exudate over the fundus. Edema extended down over Hartmann's pouch and through the area of the lesser sac and foramen of Winslow. Also observed were vascular engorgment and distention of the peritoneal reflection over the cystic and common ducts as well as the adjacent vessels. A stone was found in the cystic duct.



Figure 5.—*Obscuration of the liver edge caused by acute inflammation of the hepatoduodenal ligament.* The patient had constant, cramping and nonradiating epigastric pain of 24 hours duration. Moderate guarding in the right upper quadrant of the abdomen was noted. No masses were palpable. The temperature was not above normal range. Leukocytes numbered 14,700 per cu. mm.—80 per cent segmented forms. On the plain film of the abdomen the line of diminished density which defined the lower border of the liver was obscured (black arrows). The layer of pericolic fat believed to cause this line was obscured by the inflammatory edema. In contrast the lateral border of the liver and the inferior border of the spleen were sharply defined (white arrows).

At operation the gallbladder was large and tense and contained several large stones. The wall of the gallbladder and the gastrohepatic ligament were decidedly indurated, which obscured all structures in the gastrohepatic ligament.



Figure 6.—*Effacement of the valvulae conniventes of the duodenum due to edema of the duodenal wall.* The patient, an obese 20-year-old girl, was five months pregnant when admitted with abdominal pain in the right upper quadrant one and a half days' duration. She gave a history of two previous attacks. The uterus was enlarged almost to the umbilicus. The temperature on admission was 102°F. and leukocytes numbered 24,300 per cu. mm. —86 per cent segmented forms. The preliminary film of the abdomen showed pronounced dilatation of the second portion of the duodenum. The anatomical location and the absence of fecal material identified this dilated loop as duodenum (black arrows). The valvulae conniventes were completely effaced by the inflammatory process.

At operation the gallbladder was found to be twice normal size and its wall decidedly thickened and edematous with extension of the acute reaction into the portal triad. The cystic duct was also swollen but not dilated.

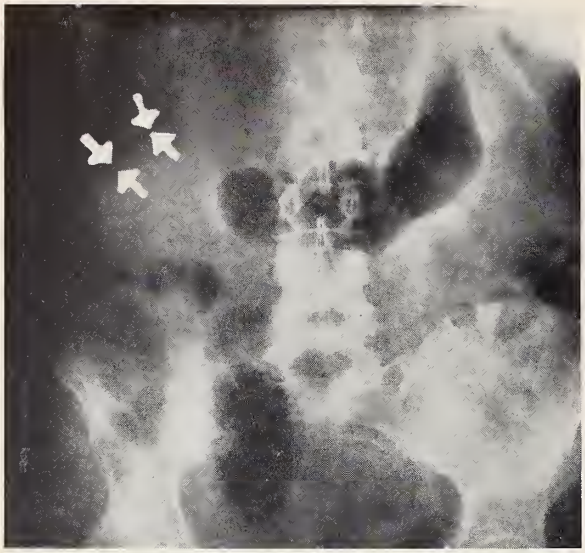


Figure 7.—*Acute cholecystitis with perforation into the gallbladder bed.* The patient, a woman 53 years of age, was well until five days before admission when vomiting, nausea and severe pain in the right upper quadrant of the abdomen developed. The abdomen was protuberant and bowel sounds were hyperactive. The film of the abdomen revealed a large, pear-shaped mass consistent with an enlarged gallbladder surrounded by bubbles of gas along its lateral aspect (arrows). The mass depressed the hepatic flexure and the transverse colon. A film of the chest showed plate-like areas of atelectasis at the right lung base, presumably due to splinting of the diaphragm.

At operation, the gallbladder was found to be perforated and acute cholecystitis was present. An operative cholangiogram showed two stones in the common duct, which were removed. Recovery was uneventful.



Figure 8.—*Generalized peritonitis and subphrenic abscess following perforation of an empyema of the gallbladder.* The patient was admitted to the hospital with abdominal pain of six hours' duration. Since the onset of symptoms he had been anorexic. The last bowel movement was two days before. There was no melena. The patient had never been jaundiced. The temperature was 99.4°F., the pulse rate 104 and respirations 22 per minute. Decided guarding in the right upper quadrant of the abdomen was noted, but no masses were palpable. Rebound tenderness was present throughout the abdomen. The x-ray film of the abdomen showed a mass in the right upper quadrant compatible with a distended gallbladder. Medial to the mass were several small bubbles of gas (black arrows). The right leaf of the diaphragm was elevated and there was a small pocket of gas beneath the diaphragm (white arrow). The presence of gas pockets over the liver was confirmed by a radiograph obtained in the lateral decubitus position. In addition, there was an adynamic ileus of the large and small bowel, with evidence of increased intraperitoneal fluid.

At operation bile-stained fluid welled up when the peritoneum was opened. The gallbladder had perforated and there were multiple small stones in and around it. Pockets of bile-stained fluid separated the liver from the diaphragm. The abscesses were drained and the patient recovered.

Because the hepatoduodenal ligament lies directly over the gallbladder, it is not uncommon to find it swollen and edematous at the time of operation. This swelling and edema tends to obliterate the line of fat which is responsible for visualization of the lower border of the liver. In comparison, the lower pole of the spleen will be readily visualized (Figure 5).

As the inflammation extends, the wall of the adjacent colon will likewise become edematous and swollen, resulting in an effacement of the normal mucosal markings and haustra. A similar change in the duodenum will result in an erasure of the valvulae conniventes (Figure 6). Friman-Dahl drew attention to this highly typical finding.[5] The examiner can be certain that he is dealing with duodenum by its anatomical location and the absence of fecal material. When doubt exists, giving Hypaque by mouth will serve to outline and thereby identify the duodenum.

Rarely cholecystitis emphysematosa will be found, the result of a gas-producing bacterial infection within the gallbladder. Gas within the gallbladder also results from a cholecystoenteric fistula, but this possibility can be excluded by a barium examination of the upper gastrointestinal tract.[10]

Small bubbles of gas in the retroperitoneal tissues around the gallbladder are indicative of perforation (Figure 7). They are due to gas-producing organisms. When they are present, surgical treatment is imperative and delay in drainage may be hazardous.

When the gallbladder perforates into the peritoneal cavity, peritonitis with diffuse ileus results. As the infectious process spreads there will be radiographic signs of increased peritoneal fluid, right subdiaphragmatic abscess and right pleural effusion (Figure 8).

Differentiating between acute pancreatitis and acute cholecystitis is difficult radiographically. Localized ileus of the colon and the upper small bowel

is present in acute pancreatitis.[2,9,15] Impaired pancreatic function will be indicated by elevated serum amylase. Unfortunately, visualization of the gallbladder and common duct is likewise impaired in uncomplicated pancreatitis, following an intravenous Cholografin test.[11]

Santa Clara County Hospital, San Jose-Los Gatos Road, San Jose.

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Marriage Problems

Dealing with Them in Private Practice

ISIDORE W. RUSKIN, *M.D.*, Los Angeles

• **Marriages and divorces in Los Angeles County almost equal each other. Marriage per se is not the cause of neurosis. When two neurotic persons marry, the resulting neurotic interaction too often ends in conflict, broken homes and a new generation of neurotic children.**

Psychotherapy must be related to the diagnosis of family psychopathology, should include all the involved members and should be directed toward the realistic goal of integrating them into family living.

Of 100 cases taken from the author's experience, 64 involved married couples and the majority of these had serious interspouse conflicts. In 37 cases both spouses were treated and substantial psychotherapy was given to one or both of the partners. It included one or more modalities varying from electroshock therapy, tranquilizers, and such psychotherapy as supportive, dynamic interpretive, individual, spouses together, group and hypnotherapy. Thirteen achieved clinical recovery, nine improved, twelve were still in therapy. In three cases therapy failed.

In 1957 there were 38,333 marriages in Los Angeles County; and in the same year there were 32,563 divorce, separate maintenance and annulment suits filed.[5] This is not fully indicative of the immensity of the problem, for there are no reliable data on the number of marriages saved from divorce by the death of a spouse or terminated by unofficial separation or desertion, or on the number of married persons who maintain a separate existence while living under one roof.

THE NEUROSIS OF OUR CULTURE

Marriage is not of itself the cause of neurosis. However, too often neurotic persons attempt the impossible: to escape from their own neurosis into happiness through marriage, which they hope will result if they leave a home situation, school, job or previous marriage in which they have been unhappy. Instead of living happily ever after, they have again to contend with their own neurotic personalities in new situations, perhaps now abetted by an equally neurotic spouse. Such a couple resembles two unhappy porcupines who, to escape the night's chill, huddle together for warmth, wound each other with their sharp quills, and separate; become chilled again, huddle again, wound each other again, and again move apart.

It must be emphasized that neurosis of the kind under discussion here—the kind that causes family conflict and which psychiatrists attempt to treat—is not inherited and is not the result of organic brain disease. It is a characteristic attitude and behavior, learned and acquired in the environment and culture in which the subject is reared and trained, and it becomes his unconscious personality and functioning. We must look to the family and to the larger society for its cause.[2]

Ours is not a stable and static society. There are manifold symptoms of disorganization and change, and the high incidence of marital conflict is only one of these. Others: a high crime rate, a mobile population, economic contradictions of inflation and depression, prosperity and insecurity. Our culture is a curious anomaly. It produces easy living, with gadgets, gimmicks and happiness pills, and an undesirable side effect of ever greater numbers of neurotics. It produces superficial materialistic values which motivate the high school and college student to choose snap pseudo-social courses and become juvenile delinquents and intellectual beachcombers. These are symptoms, and in their turn, causes of disorganization and change.

Perhaps the most important single factor, both symptom and cause, is the all-prevailing manifest conflict in cultural values. Its effect is to confuse and disturb the individual when he has to select from the conflicting value-choices of his environment, frequently with the help of parents who are equally torn between spiritual ideologies and ethical standards on the one hand and keeping up with Joneses on the other. This is so well recognized by psychiatrists that the psychotherapy of children and adolescents is largely directed toward the psychotherapy of the parents, as they are the determining factors in the pathogenic environment and the illness.

FAMILY PSYCHOPATHOLOGY AND PSYCHOTHERAPY

To continue the usual genesis and complete the circle, the child, grown to an emotionally immature

Presented before the Section on Psychiatry and Neurology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

adult, marries, affects and is affected by the neurotic interaction in the new family unit.

A patient is often referred or comes to the psychiatrist for ostensibly somatic complaints, maladjustments to work situations or family conflicts. It is only after a careful history-taking that the mental illness producing conflicts in social situations and marriage becomes evident as the basic problem. Very often, the one who comes for therapy may not be the family member most in need of it. He may be the "presenting symptom," or the one with most insight, or perhaps the most submissive member, who has been referred to the psychiatrist as a sacrificial offering. Psychiatric patients come from mentally disturbed families. Therefore any psychotherapy adapted only to the patient's own personality problems will have only limited effect if the family interacting psychopathology is neglected and the patient continues his exposure in the family. Psychotherapy must be related to the diagnosis of group psychopathology and must be concerned with the development of goal-directed, culturally oriented, realistic, healthy values and attitudes. The aim is to integrate individuals into family living, not alienate them.

The clinical practice of medicine has evolved from merely treating symptoms to the more rational therapy of a person suffering from disease, and thence to the still more comprehensive scientific concept of preventive medicine, using such techniques as immunization and community hygiene. The clinical practice of psychiatry has similarly evolved from primitive punitive attitudes, to the more humane individual therapy of a person suffering from a mental disorder, to the more comprehensive understanding and treating of mental illness as the psychopathological interaction of the individual with his group, including spouse, siblings, parents and children.[1,6]

Psychiatry is a developing science and among its practitioners are some who maintain a rigidly permissive attitude in relation to patients who resort to divorce. There are others equally dogmatic at the opposite extreme who require that their unhappily married patients continue so, until either death or psychosis intervenes. A more mature and pragmatic approach requires humane consideration for the patient, his immediate problem and how a solution will affect not only him but the whole family unit.

For the purposes of this communication, I reviewed the records of my latest one hundred patients and attempted a partial analysis and classification of those characteristics of the individuals, their problems and the therapy prescribed, which have a bearing on the subject matter.

Of the 100 patients the initial patient in 36 presentations was an unmarried person. In five of these situations (in four of which the initial patients were teen-agers) a parent or parents became the main targets of the therapy. In the cases of 54 married patients, there was some therapy given to the other spouse in addition to the primary patient—minor supportive therapy in 17 cases and extensive therapy in 37. In nine of these situations, both spouses received substantial therapy, while in 22 the spouse other than the initial patient received some therapy. In only six of these family units did the other spouse refuse to accept any therapy, although he or she was nevertheless consulted and oriented as to the psychopathology and psychotherapy of the marital partner.

Of 64 married patients, 47 expressed overt hostility toward the other spouse at the first interview, five at subsequent interviews. Twelve were more subtle and veiled in their manifestations of hostility; there was no divorce threat in nine of these couples, and in three the spouses genuinely liked each other.

Treatment given to those who were given the more extensive therapy included the use of tranquilizing drugs, electroshock and psychotherapy. The latter ranged from supportive to analytic and sometimes included hypnotherapy. Some patients had individual treatment; in other cases both spouses were treated together and in others group psychotherapy was used. In some instances therapy was continued for only a few weeks, in others for several years and hundreds of sessions.

Thirteen of the 37 couples who underwent extensive psychotherapy reached what can be looked upon as "clinical recovery" in that they became able to dwell together amicably as husband and wife. Nine others had considerable improvement and at this writing 12 were still in therapy with promising indications. Three had no improvement.

In none of these cases was there any indication of fact to give basis to the unfounded charge that there is causal relationship between psychotherapy and subsequent divorce, promiscuity or other immature behavior.

PSYCHOTHERAPEUTIC MODALITIES

There are varied psychotherapeutic methods which can be used either singly or in combination—electric shock, chemotherapy and psychotherapy. Psychotherapy as now used refers particularly to the mental approach to the intellect and emotions. It may be supportive, dynamic interpretive or hypnotherapy. Psychotherapy also includes the manipulation and adjustment of the environment, the better to meet the patient's needs. This may require therapy of the group, including the spouse, parent or other dominant individual. Therefore a comprehensive

therapy for the individual as he functions in his environment may require the treatment of the individual alone, sometimes together with his spouse or other member of his family and sometimes in group psychotherapy with others, or a combination of these forms of treatment.

The first step is to establish rapport and empathy. Therapy begins with the initial greeting of the patient, a welcoming handshake and an invitation to a comfortable seat. A small but pertinent technique for establishing rapport may be the offering of a cigarette or the sharing of a piece of gum with the patient. It is like breaking bread together. Even though usually there is some information about the patient from the referring physician or family, the patient is asked to tell all about his problem or situation in his own words and in his own way. This helps to give the feeling that there has been no prejudgment of the patient or his problem. This applies equally to any member of the family who may be interviewed subsequently.

The patient is encouraged to ventilate his complaints and recriminative feelings against spouse, parent, children and others. Sometimes it is necessary to direct the discussion into more relevant channels. Care is taken not to suggest any condemnation or judgment. However, it is equally important in extending acceptance and empathy not to lead the patient to believe that he has the stamp of approval of all of his attitudes and conduct. The patient's revelations are then analyzed and interpreted. so that the patient is given insight into his immature attitudes and behavior, and at the same time is given some understanding of the immature retaliative behavior of those with whom he has neurotic interaction. This blunts many of the arrows in the cold and hot war between the spouses and leads to greater tolerance and empathy for each other.

Each individual, whether recriminative or self-degrading, is on the defensive. He has a feeling of guilt, inferiority, insecurity and anxiety. Each needs ego-building and relief from feelings of guilt, but not at the expense of the other spouse. Often, as a defense, he will say that marriage is a 50-50 proposition and that he had held up his end. And it must be pointed out to him that the 50-50 attitude falls short and will not bridge the needs of living together. He is made to understand that what is needed is all-out giving, without any holding back. Precept and practice must be brought into better perspective. He is helped to reexamine social codes, realities and the Joneses. Realistic compromises must replace narcissistic needs for perfection, and give motivation to salvaging marriages and families. It is a difficult and complex thing to be a human being, and human beings are not yet up to it.[3]

6360 Wilshire Blvd., Los Angeles 48.

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***Discussion* by JOHN D. MORIARTY, *M.D.*, Los Angeles**

DR. RUSKIN has presented an interesting and comprehensive discussion of various phases of the practical management of marital problems encountered in the psychiatrist's private practice. He has properly laid emphasis on the neurotic interaction of the marriage partners.

It might not be amiss to point out that one of the major sources of difficulty is that in our society it frequently happens that two people of quite different cultural backgrounds marry. In such circumstances, even though they may genuinely love each other, they may have frequent clashes or disagreements about many things because of the different value systems and the different unconscious concepts of what marriage consists of—even though they reach a pretty good area of agreement about marriage on the conscious level.

A factor not specifically dealt with by Dr. Ruskin is that in our changing culture the role of the male and the role of the female have become distinctly blurred. Particularly with the developments in World War II—the increasing breakdown of the barriers between the masculine and the feminine role, and since then women going out and actively competing with men—there has been further confusion as to the separate identity of the two marital partners.

A further factor, which Dr. Ruskin did not discuss is the observation of Carl Jung that opposite personality types tend to marry. Thus, the extrovert tends to marry the introvert; the analytic, the intuitive. It seems safe to infer that this is Nature's way of trying to round out the progeny from a biological standpoint. Unfortunately, the very qualities which originally attracted the two partners to each other tend to become sources of conflict after the marriage. Thus the extrovert complains that his introverted wife does not like to have people in often enough and wants to be too much of a homebody. The person who tends to operate by analytic judgment complains that his intuitive wife is too "emotional." In other words, each partner tries to change

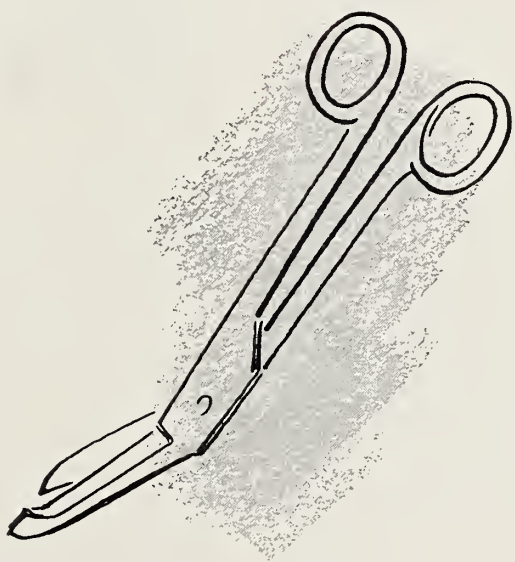
the other one over to his own way of thinking and his own emotional attitudes.

If these assumptions are reasonably correct, we can raise the question whether all of the major problems described in American marriages should be considered symptoms of neurosis. I would be the first to agree with Dr. Ruskin that frequently neurotics marry one another and then continue the elaboration of their respective neuroses in the interaction of that relationship. However, it would seem fair to say that many reasonably healthy people have difficulties which can be explained on the basis of serious discrepancies in their respective cultural backgrounds and their different value systems. This is important from a therapeutic standpoint, because it implies that relatively short term psychotherapy and counseling may produce surprisingly good results.

As regards persons with more full-fledged neuroses, Dr. Ruskin has given a very good description of a practical approach which has apparently proved successful in his hands. It is worth noting that not all psychiatrists are sufficiently eclectic and flexible to utilize this form of approach. However, I think that we would all agree that frequently it is ideal from a therapeutic standpoint to treat the family rather than the individual. Unfortunately practical considerations of time, of money and of resistance on the part of certain members of the family often make this impossible. Probably most psychiatrists usually have to content themselves with treating the member who is "hurting" the most at the time. Yet we have all had the experience over and over again of treating the patient with the most obvious symptoms while recognizing that the marital partner or the parent, as the case may be, is the one who is the real pathogenic source in the family constellation. Fortunately, helping the patient may have considerable beneficial effect on the untreated partner.

One final point: The orthodox psychoanalytic point of view seems to be that the same therapist should never treat both marital partners, but rather refer one to a colleague. The more flexible psychoanalysts now seem to feel that if one partner is undergoing intensive therapy, the other may be seen occasionally for auxiliary consultation but never for analytic treatment. I feel very strongly that with proper techniques it is indeed possible for the same therapist to treat, intensively, both members of the marital partnership. It involves, of course, special techniques in handling different phases of the relationship, particularly those which are sometimes termed "transferance" and "countertransference." On the other hand, it enables the therapist to get additional valuable data about the respective problems of each spouse and to function as a unifying force in the marital conflict.

7046 Hollywood Blvd., Los Angeles 28.



Preventive Aspects of Mental Retardation

THOMAS L. NELSON, *M.D.*, and WYLDA HAMMOND, *M.D.*, Eldridge

MENTAL RETARDATION is a symptom complex which may be the result of any of a large number of specific organic diseases, emotional disorders or disturbances in the relationship between a person and the society in which he must live. In this discussion, the terms *mental retardation* and *mental deficiency* are used interchangeably. The incidence of mental retardation is reported from several surveys as varying from one to three per cent of the population.[4,5,6,7] Such surveys have suffered from the lack of a universally accepted criterion for mental retardation and from difficulty in case finding.

• Estimates of the incidence of mental retardation vary from 1 to 3 per cent of the population. Prevention of this disability requires different methods, depending on the cause. Retarded persons are of four broad categories: Those who are the low end of the normal distribution curve of intelligence in the general population, without any specific illness or defect; those in whom retardation is culturally and socially determined; those who are functionally retarded due to emotional disorder; and those with damage of the brain structure.

More flexibility is required within our relatively complex society so that dull people can adapt themselves, achieve acceptance, and find a vocation within their range of ability.

There is need for improved services for the early diagnosis and treatment of emotional disturbances in children, and for counselling with parents of slow learning children to make the family climate as favorable as possible.

Certain diseases which cause organic defects in the brain are now sufficiently well understood to make possible the prevention of mental retardation in persons with these diseases—cretinism and congenital syphilis among them. More recently, an increasing emphasis on the preventive approach to mental retardation has been made possible through our understanding of the effects of German measles in early pregnancy, knowledge of such metabolic errors as phenylketonuria and galactosemia, of kernicterus caused by Rh incompatibility between mother and child, as well as by our increased knowledge of human genetics.

CATEGORIES OF DEFICIENCY

Prevention of this disability requires different methods, depending on the cause. From among the large number of specific causes of mental retardation, retarded persons fall into four broad categories:

1. Those whose mentality is at the low end of the normal distribution curve of intellect for the general population, without any specific etiological illness or defect.

2. Those in whom the disability is culturally and socially determined.

3. Those who are functionally retarded due to emotional disorder.

4. Those in whom the deficiency is owing to organic disease of the brain structure.

Intelligence and other human characteristics showing continuous variation are determined by multiple genes. Such characteristics tend to distribute according to the normal distribution curve. By such normal variation alone, we would expect a certain proportion of the population to be at the low end of the curve and be deficient. The curve for intelligence in the intelligence quotient range from 65 to 80 is very steep. Hence variation in the dividing line between what is considered normal and what is considered defective will cause a large change in the number falling into either category.

In a primitive society, the point at which subjects are considered retarded is at the low end of this range. As society gets more and more complicated, the point of retardation goes up. A study in Onondaga County, New York, showed the highest incidence of suspected retardation to be in the school age group of 10 to 15 years.[5] This finding is probably due to the fact that the "school society" is most demanding on intellectual ability. It would seem that prevention of retardation, from the point of view of cultural and social determination in the above sense, requires the development of flexibility within our relatively complex society—a flexibility that will permit dull persons to achieve acceptance and economic independence from a vocation within their ability. Education of our society to the usefulness and qualities of these relative retardates appears to be essential. Finding an acceptable place for them in the social and cultural structure will have

Presented before the Section on Public Health at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

Superintendent and Medical Director, Sonoma State Hospital, Eldridge, California, and Assistant Clinical Professor of Pediatrics and Lecturer in Psychiatry, University of California School of Medicine, San Francisco (Nelson). Physician-in-Chief, Sonoma State Hospital, Eldridge, California, and Clinical Instructor in Pediatrics, University of California School of Medicine, San Francisco (Hammond).

the effect of lowering the dividing line between the retarded and the non-retarded. Many more persons will be affected in this manner than by anything that might be done to prevent retardation that stems from organic disease or emotional disorder.

Emotional or psychological disorders may, in themselves, make a person retarded in his intellectual functioning. Although this may occur with a person of basically average or superior intelligence, it is most likely to occur in one who is in the low average or borderline range. In many families, a child who is basically borderline is likely to be subjected to great pressure to achieve. In California the group in which "emotional disturbance" plus "dullness" has equalled "retardation" makes up between five and ten per cent of the persons who are in hospitals because of retardation. It is in this group that psychiatric treatment has its greatest success in hospitals in this state. Prevention, in these cases, depends on early diagnosis and treatment of emotional disturbance and on counseling with parents of slow-learning children, in an attempt to make the family climate as favorable for the child as possible.

DEALING WITH CONGENITAL CAUSES

Although proportionately the number of persons who are mentally retarded due to organic defect of the brain structure is small, some real progress in prevention is being achieved in this group. Even more should be achieved. Mental retardation owing to congenital syphilis, once a fairly common reason for admittance to hospitals for the retarded, is practically never seen in younger persons being admitted nowadays. The pathogenesis of cretinism has similarly been known for many years but, unfortunately, cretinous children are still being admitted to our hospitals for the retarded. Early diagnosis and treatment could have prevented mental retardation in many of them.

From the point of view of prevention of retardation, the tendency to include rubella among the exanthematous diseases calling for isolation and exclusion from school is unfortunate. Recent articles in the lay press encouraging mothers to see to it that their daughters contract rubella before adulthood, should be helpful. The recent idea of German measles parties for teen-age girls is a novel tool in furthering the ends of preventive medicine.

The number of new cases of mental deficiency due to kernicterus has been rapidly decreasing since the introduction of exchange transfusions. There is a need, however, to extend diagnostic facilities for erythroblastosis and knowledge of the techniques of exchange transfusion to some of the smaller and more rural communities of this state.

Several investigators, treating a few phenylketonuric patients from early infancy with a phenylalanine deficient diet, have been able to achieve normal development in these patients over a period of several years.[1,2,3] How these patients will eventually turn out remains to be seen. Normal development is achieved only when treatment is begun early. The widespread use of the ferric chloride spot test on the diapers of infants in well baby clinics and in private practice would lead to diagnosis in many of these babies in time to hope for the prevention of brain damage through the use of the diet.

Accident prevention and poison control measures are important in this field. All large institutions for the retarded have children who are retarded because of cranial injuries received in automobile accidents or falls down stairs or from highchairs or windows. Among the patients at the Sonoma State Hospital, camphor, usually in the form of camphorated oil, is the poison which has caused the largest number of retardation cases due to poisoning. Although lead poisoning as a cause of mental retardation is very uncommon in northern California, it is an important cause in the country as a whole.

There is a great need for physicians with a background in both mental deficiency and human genetics to do genetic counseling with parents of retarded children. Among the kinds of mental deficiency transmitted by dominant inheritance are epiloia, or tuberous sclerosis, and Von Recklinghausen's neurofibromatosis. Characterized by a recessive type of inheritance are phenylketonuria, genetic microcephaly, Laurence-Moon Biedl syndrome and Tay-Sachs disease, to name several of the more common ones. Gargoylism, or lipochondrodystrophy, may be transmitted by a pure recessive mode of inheritance in some families, and as a sex-linked recessive in others.

Sterilization of retarded persons as a measure to prevent mental retardation has largely fallen into disrepute in California. In most cases of organic retardation due to known genetic disease, the patients are so severely retarded that sterilization is not necessary; but the authors believe it may be indicated in patients with epiloia who are only mildly retarded.

There is still a long way to go in research into the cause of congenital anomalies. There is certainly a great urgency to discover preventive measures for a disease as common as mongolism, which occurs in one of every seven hundred births.[6] Present knowledge of galactosemia and phenylketonuria should lead the way to the discovery of still other controllable metabolic defects causing mental deficiency.

P. O. Box 218, Eldridge (Nelson).

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Rheumatic Fever in College Students

ALFRED F. GOGGIO, M.D., Berkeley

• The results of three independent surveys concerned with rheumatic fever and heart disease in students at the University of California were assembled and found to be in close agreement. A full 2 per cent of all students believed they had had rheumatic fever; and several times that proportion gave a history of one of the rheumatic manifestations. Only 0.25 per cent had demonstrable rheumatic heart disease and 0.1 per cent had congenital heart disease.

Physiologic murmurs may occur in 3 per cent or more of students entering college.

Penicillin prophylaxis is important in persons with rheumatic heart disease, but it is important not to put a label of rheumatic heart disease on persons who think they have had rheumatic fever but who have no demonstrable heart disease. Long term penicillin prophylaxis or other long term prophylactic procedures directed against rheumatic fever are not indicated unless the diagnostic criteria for rheumatic fever are clearly met or unless rheumatic heart involvement is definitely present.

THE INCIDENCE of rheumatic fever and rheumatic heart disease in any population is a matter of some practical importance, particularly so now that methods of prevention and of continued prophylaxis against further attacks of the disease are being so widely stressed. Accurate statistical studies are rare. The author has previously presented studies on the incidence of rheumatic fever and rheumatic heart disease in one large although admittedly select segment of the population—college students.[1,2] It is the purpose of this report to present briefly the results of two new surveys dealing with the incidence of rheumatic fever and of rheumatic heart disease and to compare the findings with those of the previously reported survey. All three surveys were done at the University of California, Berkeley campus. They were done, however, at different times, by different methods, on entirely different groups of students, and completely without inter-reference one to the other.

Student population survey of 1954

Every student upon registration at the University of California in Berkeley is "health processed" through the Student Health Service situated in the Ernest V. Cowell Memorial Hospital. At the time of processing, each student is given a health record card upon which he or she fills in certain requested pertinent information, including the age at which he or she had certain specified diseases and symptomatologic entities, of which rheumatic fever was one. Each student is given a complete physical examination and photofluorogram of the chest and the results are recorded in detail on the same health record card. This health record card is kept on file by the Student Health Service and it is used as a record of all visits and illnesses of that student throughout his stay in the University.

In the spring of 1954 the entire student population of the Berkeley campus, 14,898 persons, was surveyed in a mass photofluorographic study that was conducted by the Department of Biostatistics in cooperation with the Ernest V. Cowell Memorial Hospital and the United States Public Health Service. In addition to the photofluorographic aspect, and because of the availability of considerable data, one of the objects of the study was to obtain certain descriptive information about the student population. The student's health record card was one of the documents that was reviewed and coded for this purpose.

A history of rheumatic fever was one of the items on the health record card of all students that was examined and coded for a positive answer. It was found that there were 259 persons in the total registration of 14,898 who had indicated on their card that they had had rheumatic fever. Hence the incidence of rheumatic fever as given by the student himself in this survey was 1.74 per cent.

Survey in conjunction with the Division of Special Services of the Department of Health, Education, and Welfare, 1956-1957

In the course of the past two years or more, the Division of Special Health Services of the Department of Health, Education, and Welfare has been collecting data from more than 65 colleges and universities in the United States relating to rheumatic fever and rheumatic heart disease. The University of California, Berkeley campus, was one of the participating colleges in this study. This survey was confined to entering freshmen of both sexes.

In the conduct of this survey, each entering freshman at the time of processing by the Student Health

Submitted February 25, 1958.

Service was given (in addition to the previously mentioned health record card) a questionnaire form provided by the Division of Special Health Services upon which several questions were to be answered by the student: 1. "Have you ever had (A) inflammatory rheumatism, (B) scarlet fever, (C) Saint Vitus' dance (chorea), (D) joint pains and swelling, (E) leakage of the heart valve(s) (heart murmur)?" Each question was to be answered by checking either "no" or "yes" or "don't know." 2. "Have you ever been told by a physician you had rheumatic fever?" Again the answer to be indicated by checking "no," "yes" or "don't know." (There were additional questions on the form but they were not pertinent to the present review.) All the questionnaire forms were reviewed by the college physician.

In the survey here reported as carried out at the University of California, Berkeley campus, whenever the answer to any of these questions was "yes" or "don't know," the cardiologist checked the questionnaire against the student's health record card and recalled the student for further questioning and re-examination in order to evaluate the reliability of the history and to establish a definite diagnosis wherever possible. Also re-examined by the cardiologist were all students in the same entering freshmen groups in which a history of rheumatic fever was otherwise obtained or in which the possibility of heart disease was found in the course of the entrance physical examination. Electrocardiograms and cardiac x-ray studies were done in all cases in which there appeared to be possibility of heart disease. The cardiologist attempted to reach a definite diagnosis in all cases, applying closely the Criteria for Diagnosis of Diseases of the Heart adopted by the American Heart Association.

Included in this survey at the University of California, Berkeley campus, were all entering freshmen for the year 1956-57. The total number was 2,259, of whom 1,150 (50.9 per cent) were males and 1,109 (49.1 per cent) were females. Racially the population consisted of 1,199 (90.6 per cent) whites, 156 (7.1 per cent) Oriental and 41 (1.9 per cent) Negro. In Table 1 the answers to Question No. 1 are presented to show the historical incidence of each of the five conditions listed and also the relationship of each condition to a concomitant history of rheumatic fever as obtained from positive answers to Question No. 2. In answer to Question No. 1 of the questionnaire, 219 (9.7 per cent) different students said they had had at least one of the five conditions listed. As to Question No. 2, "Have you ever been told by a physician that you had rheumatic fever?" 45 of the 2,259 answered affirmatively. Thus the incidence of rheumatic fever based on the student's knowledge of having been told he had had the disease was 2.0 per cent. (It may be noted that questioning by the cardiologist revealed a convincing symptomatic history of rheumatic fever in only six persons.) Rheumatic heart disease was diagnosed in five of the total of 2,259 persons; one of the five had answered "no" to the question about whether he had been told he had had rheumatic fever. The incidence of rheumatic heart disease diagnosable at the time of entry was therefore 0.22 per cent in this group of 2,259 entering freshmen. Two students were diagnosed to have congenital heart disease, or roughly 0.09 per cent.

TABLE 1.—*Incidence of Positive Answers to Questions 1 and 2* from Data Obtained in Survey of 1956-57 Using Form Questionnaire of Department of Health, Education, and Welfare*

Disease	No. of Students with Disease	No. with Disease Who Said They Had Also Had Rheumatic Fever	Per Cent
Inflammatory rheumatism	1	1	100.0
Scarlet fever	117	4	3.4
St. Vitus' dance (chorea)	1	1	100.0
Joint pains and swelling	34	11	32.4
Leakage of heart valve(s) (heart murmur)	84	20	23.8
No. of different students with above diseases†	219†	27†	12.3
No. without any of above diseases	2040	18	0.9
Total students	2259	45	2.0

*(1) Have you ever had (a) inflammatory rheumatism, (b) scarlet fever, (c) St. Vitus' dance (chorea), (d) joint pain and swelling, (e) leakage of heart valves (murmur)? (2) Have you ever been told by a physician you had rheumatic fever?

†Some of the students had had more than one of the diseases listed; hence there were fewer students than cases of the diseases.

Survey of all entering students registering for the fall semester of 1949 and fall semester of 1950

The author previously reported a survey of all entering students registering for the fall semester of 1949 and fall semester of 1950 which was much more complete and detailed than the two surveys presented above.[1,2] In that survey all students whose health record card showed any history suggestive of heart disease, or in which there was a notation on entrance physical examination or elsewhere of the presence of a heart murmur, of cardiac arrhythmia or of abnormal blood pressure, were called for reexamination and evaluation by the cardiologist. The author saw each such person at least once in order to arrive at a definitive diagnosis wherever possible. As previously mentioned, the Criteria for Diagnosis of Diseases of the Heart adopted by the American Heart Association was closely applied.

In this study, the entire group surveyed comprised 11,096 students, of whom 7,566 (68.2 per cent) were males and 3,530 (31.8 per cent) were

TABLE 2.—*Comparison of Data Obtained in Three Surveys of Incidence of History of Rheumatic Fever in College Students as Related to Actual Presence of Diagnosable Rheumatic Heart Disease*

Survey	No. in Survey	Giving History of Rheumatic Fever		Diagnosable Rheumatic Heart Disease		Diagnosable Congenital Heart Disease	
		No.	Per Cent	No.	Per Cent	No.	Per Cent
1949 and 1950	11,096			30	0.27	12	0.11
1954	14,898	259	1.74				
1956-57	2,259	45	2.0	5	0.22	2	0.09
Total	28,253		2.0				

females. (The high proportion of males in this survey was due in part to the large number of persons attending college after service in World War II.) Of this number, 378 were evaluated by the cardiologist for the reasons given above. Thirty students (0.27 per cent) were diagnosed as having rheumatic heart disease, 12 (0.11 per cent) as having congenital heart disease, and 26 (0.23 per cent) as having "possible heart disease." No record was made in this survey as to how many of the 11,096 students in the group had been told previously by a physician that they had had rheumatic fever; therefore this information is not available.

DISCUSSION

These three independent surveys, carried out at widely different times on different populations at the same University, and each seeking somewhat different data, encompass a student population of 28,253. They appear to show surprisingly close agreement in comparable data related to rheumatic fever, as is readily noted in Table 2. It would appear (from the surveys of 1954 and of 1956-57) that in such a student population some 2 per cent readily recall having been told that they had had rheumatic fever. A much larger proportion had a history of one of the conditions commonly considered to be rheumatic manifestations (survey of 1956-57). Approximately 0.35 per cent had diagnosable heart disease (surveys of 1956-57 and of 1949 and 1950). The incidence of diagnosable rheumatic heart disease approximated 0.25 per cent; the incidence of congenital heart disease, 0.1 per cent.

It is noteworthy that only about one in nine of the students who said they had been told by a physician at one time or another that they had rheumatic fever, had diagnosable rheumatic heart disease upon entering college. Of the total number of those giving a history of inflammatory rheumatism, Saint Vitus' dance (chorea), joint pains and swelling or leakage of the heart valve(s) (heart murmur), about one in 24 had diagnosable rheumatic heart disease on entering college. It is apparent that the student's historical knowledge of having had rheumatic fever or one of its common manifestations is of very limited value as evidence of rheumatic heart disease.

Of course the eliciting of a convincing history of rheumatic fever, particularly of migratory polyarthritis with fever from the student's own recollection of the illness is much more reliable; but, as was noted in the 1956-57 survey, such information was obtainable from only six of the total large number of students giving positive answers to the questions regarding a history of rheumatic fever or one of its common manifestations. Possible conclusions are either that rheumatic fever, as diagnosed by physicians, is a more benign disease than it is usually considered to be or that perhaps rheumatic fever is being diagnosed upon insufficient grounds. Of course, it is possible that an appreciable number of students who were so diagnosed in the past, did indeed have rheumatic fever or rheumatic heart disease and the diagnostic murmurs had regressed and the changes had become so slight they were no longer detectable by clinical, electrocardiographic or radiologic means. Such a possibility is strongly suggested by a recent report of Wilson and Lim[4] dealing with "The Natural History of Rheumatic Heart Disease in the Third, Fourth and Fifth Decades of Life." Reporting on 757 of 1,042 rheumatic children under observation during the years 1916 to 1956 who had reached the age of 20 years or more, Wilson and Lim noted that in about 50 per cent of the patients residual cardiac damage had been characterized by mitral insufficiency and moderate cardiac enlargement, and that in two thirds of patients with these characteristics the auscultatory murmurs regressed and cardiac chamber enlargement "would not have been recognized on physical examination or by the usual radiographic examination limited to the posterior-anterior view." The author suspects that for most cases this last statement might be broadened to include all the usual cardiac views and an electrocardiogram. But even with this allowance, one must conclude that the incidence of diagnosable rheumatic heart disease in the college population studied herein is less than should be expected on the basis of the number who had history of rheumatic fever. In these days of long-term prophylaxis for persons in whom rheumatic fever has been diagnosed, not to mention the very practical matter of life insurance eligibility, it is most important to make the diagnosis of rheu-

matic fever only on the basis of sufficient positive criteria such as those that were so well worked out by the late T. Duckett Jones.[3] In these criteria, the presence of carditis is preeminent, for basically the presence of cardiac involvement is the only important reason for making the diagnosis at all. Penicillin or other prophylactic procedures of long-term nature are not indicated unless the diagnostic criteria for rheumatic fever are clearly met or unless rheumatic heart involvement is definitely present.

2628 Telegraph Avenue, Berkeley 4.

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ACKNOWLEDGMENT: The author is greatly indebted to Lucille Milkovich of the Department of Biostatistics of the University of California for the use of her findings as given in the "Student population survey of 1954" and for the compilation of the statistics of the "Survey of 1956-57." He is also indebted to the late Wm. G. Donald, M.D., University Physician, and to the administrative staff of the Ernest V. Cowell Memorial Hospital for making it possible to collect the medical data reported in these studies.

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Algerian Ivy Dermatitis

A California Disease

CLETE S. DORSEY, M.D., Pasadena

• **A hitherto unrecognized cause of contact dermatitis in California is the widely cultivated plant known as Algerian ivy. This plant, which grows in California (and its close relative, English ivy) causes a dermatitis which is similar to although milder than that caused by poison oak. Dermatitis from this cause occurs most frequently when persons who have become sensitive to it by previous contact trim the plant back in the spring after its seasonal spurt of growth. For persons whose occupations require repeated contact with the plant, dermatitis from this cause is an occupational hazard. Dermatitis from this plant is easily diagnosed by means of a simple patch test.**

In a series of 12 cases the only effective treatment was with corticosteroid agents.

OFTEN a patient who seems to have poison oak dermatitis cannot recall any exposure to poison oak plants. Since a patch test showing a positive reaction could do no more than confirm that poison oak might be the cause of the disease, a diagnosis of poison oak dermatitis often is made without adequate proof.

In the summer of 1957 the author observed two patients with dermatitis of a kind indistinguishable from poison oak rash, yet in neither case was there the remotest possibility of contact with poison oak. In both of these patients the dermatitis was eventually traced to contact with the sap of a species of ivy (Algerian ivy, Figure 1); both had touched the plant just before the eruption appeared. This plant, which is not even distantly related to poison oak or ivy, is widely used in California as a ground cover.

No previous reports of dermatitis caused by this plant were found in the literature and the two cases were published[3] without knowledge as to whether dermatitis from this cause was common or a medical oddity. In the succeeding 18 months however, I observed ten more cases of Algerian ivy dermatitis in my practice. This total of 12 cases compares with 37 cases of poison oak dermatitis which I treated during the same period. Algerian ivy dermatitis was, in fact, the second most common type of plant dermatitis I dealt with.

The following case reports will illustrate typical and distinguishing features of Algerian ivy dermatitis.

CASE 1. A 34-year-old physician had pruritic, urticariopapular dermatitis over the extensor surfaces of both knees and over the dorsa of both hands and wrists. The lesions in the four involved areas were diffuse and plaque-like, except at the periphery, where satellite linear streaks could be seen.

The patient said that on six successive week-ends he had been engaged in uprooting a large patch of Algerian ivy. His knees and wrists (gloves were worn) became stained with the sap of the broken plants. On the fifth such occasion a transient dermatitis appeared on the knees and wrists. The sixth exposure was followed in 48 hours by extremely pruritic dermatitis. A patch impregnated with sap from crushed leaves and stems of Algerian ivy taken from the growth remaining in the yard was applied to the patients right upper, inner arm. Thirty-six hours later the patch had to be removed because of intense pruritis beneath it. An urticariopapular dermatitic reaction was present and it persisted for more than

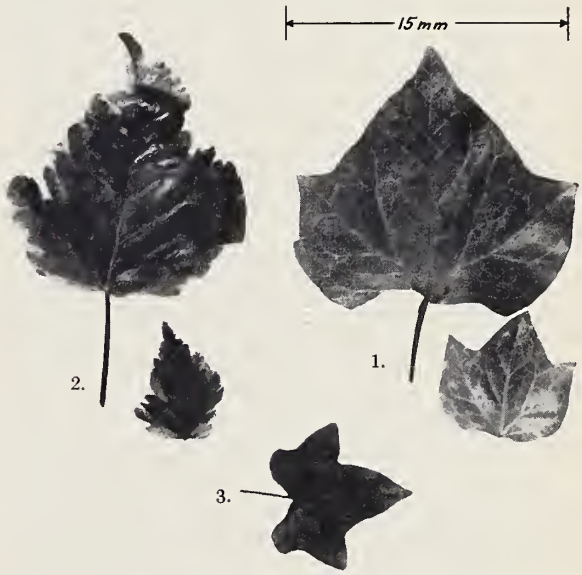


Figure 1.—Comparison of English and Algerian ivy leaves. On the right are two Algerian ivy leaves to show the variation in size within a single species. On the left are two variegated Algerian ivy leaves. The lower leaf is from an English ivy plant. Note that the Algerian ivy leaf is larger, has three distinct points and a pigmented (red) stem. The English ivy leaf is smaller and has five points. Other less obvious characteristics differentiate the two species. All these plants may cause dermatitis.

From the Department of Dermatology, University of Southern California School of Medicine, Los Angeles.

Submitted June 30, 1958.

two weeks. The dermatitis of the knees and hands cleared also in about two weeks. A month later reaction to a patch test with material from crushed English ivy leaves was positive after 36 hours. (The relationship between English and Algerian ivy will be discussed later.) The erythema from this patch test also required approximately two weeks to disappear.

The patient had red hair and a pale, freckled skin. However, except for attacks of miliaria rubra in hot weather he had never previously had acute dermatitis. A seasonal rhinitis which had been present since childhood was the only other manifestation of an allergic disposition.

Comment: In this patient sensitivity seemed not to have been present until after repeated contact with Algerian ivy. Apparently the toxic substance was contained in the sap, since he could handle the unbroken leaves with impunity.

CASE 2. A 76-year-old man had urticariovesicular dermatitis in streaks and plaques over the extensor surfaces of the forearms, upper chest and face. The patient could recall no contact with poison oak, and he mentioned that a few days previously he had been trimming a broad leafed ivy in his yard. However, since the clinical symptoms were so strongly suggestive of it, poison oak dermatitis was diagnosed. Under appropriate therapy the skin cleared in about three weeks and the patient was dismissed.

Several weeks later, after the dermatitis in Case 1 was proved to be caused by Algerian ivy, the second patient was telephoned. He reported that he had had another attack of intense vesicular dermatitis of the face after brushing his face against some cut stems of the same broad leafed ivy which he had suspected previously. He was asked to bring in some leaves of the plant, and meanwhile to apply a test patch of material from the crushed leaves so that the result could be observed when he came in. Somehow he misunderstood the instructions. Instead of applying a small patch as directed, he had covered the entire flexural surface of one forearm with crushed leaves. By the time he appeared for examination, acute vesicular dermatitis was present over the entire forearm. The eruption, which appeared 36 hours after the application of the leaves, was so severe that four weeks of therapy with corticotropin and cortisone were required.

Several months later this patient was patch tested for sensitivity to the juice of English ivy. Within 12 hours an intense urticarial reaction occurred beneath the patch. This reaction became vesicular and was so intense that severe vesicular dermatitis developed again in the healed area of the left forearm. Corticotropin and cortisone were required to bring this patch test reaction under control.

The patient had a history of allergic sensitivity. He was very sensitive to poison ivy and poison oak leaves. In his opinion, the dermatitis from Algerian ivy was less severe than that which he had experienced from poison ivy. He was also sensitive to strawberries, fresh pears, chicken and chocolate. Within a few hours after he ate any of these foods, a generalized erythematous, blotchy, urticarial eruption would appear on the skin. Once the eating of cashew nuts had been followed by edema of the lips, face, tongue and pharynx.

Comment: In this case the period of developing sensitization was less definite than in the first case. The patient remembered having trimmed the ivy a few times before without incident. Even after sensitization he could handle the unbroken leaves with impunity. Apparently contact with sap from the plant was necessary to provoke a reaction. Also, as in Case 1, sensitivity to English ivy was present after the Algerian ivy dermatitis.

CASE 3. The patient was a 34-year-old "tree surgeon." He knew that he was hypersensitive to Algerian and English ivy, and avoided cutting down trees which grew out of a ground cover of these plants or had them growing up their trunks. Yet in spite of a certain amount of caution he was forced into contact with Algerian and English ivy several times a year. Every contact was followed by a skin rash that lasted from two weeks to a month. He considered Algerian ivy more of a problem than English ivy because it was more common and the plants were juicier.

The attack of dermatitis for which he sought treatment involved the forearms, face and neck. Patch tests for sensitivity to English and Algerian ivy were both positive. Topical application of hydrocortisone ointment and lotion, wet dressings and bland lotions had no effect on the dermatitis during the first week of therapy. Prednisone by mouth was of no benefit. Ten days after the onset of the eruption, 80 units of corticotropin gel was administered and symptoms were almost immediately relieved. Forty units of cortocotropin gel was administered intramuscularly daily for the next ten days. Then two daily injections of 20 units each were administered to taper the dosage. At the end of this time the dermatitis had diminished to an asymptomatic dry scaliness. The patient continued to have attacks of dermatitis every three to five months. Corticotropin gel was the only agent which would bring these attacks under control.

Comment: For this patient Algerian ivy dermatitis was a serious occupational hazard. Apparently repeated exposures to the plant had not brought about immunity to its toxic effects.

CASE 4. A 65-year-old man had vesicular dermatitis involving the tops of the hands and fingers, the under surfaces of the wrists, the tops of the forearms and the periorbital areas. The dermatitis resembled that of poison oak but the patient denied contact with poison oak plants. On the day before the appearance of the eruption he had trimmed a small patch of Algerian ivy which grew in his yard. He had lived in his present home for several years and usually was required to trim this growth of ivy

once a year after the spring rains but in previous years had not had dermatitis afterward. Reaction to a patch test with material from Algerian ivy leaves was strongly positive. Treatment consisted of prednisone by mouth in a dosage of 20 mg. daily for ten days. Then the dosage tapered to zero over the next ten days.

Comment: This case is indicative of the seasonal nature of most cases of Algerian ivy dermatitis. The most rapid period of growth of this plant occurs during and after the rainy season. Usually householders trim the plant sometime within the month after the rains have stopped. Then, with the coming of hot weather it grows more slowly.

CASE 5. A 55-year-old man had vesicular dermatitis on the hands, wrists, forearms, face and neck. Several times in previous years he had been treated for severe attacks of poison oak dermatitis. In most of these attacks the history of contact with poison oak was good and other members of the family were also usually affected. One attack of dermatitis, however, which had occurred almost exactly a year before the present one, had occurred without a history of contact with poison oak plants. As to the present eruption, the patient was asked if he had recently trimmed any Algerian ivy. He had—just two days before the onset of dermatitis. A patch test with material from Algerian ivy leaves was strongly positive. Treatment with prednisone brought the eruption under control.

Comment: Doubtless I had misdiagnosed the dermatitis of the year before. The patient had trimmed ivy that time also. This illustrates how easily the diagnosis of Algerian ivy dermatitis may be missed.

CASE 6. A 36-year-old woman had vesicular dermatitis in streaks and lines on the tops of the hands and forearms and on the face and neck. A diagnosis of contact dermatitis was made. The patient suggested that the dermatitis was due to contact with Algerian ivy cuttings which she planted by the hundreds each day in her work in a commercial nursery. A patch test for Algerian ivy sensitivity was positive. The patient said that she was also sensitive to Hahn's ivy and English ivy. Hahn's ivy is a variant of Algerian ivy (Figure 2). Treatment with prednisone by mouth in dosage of 20 mg. daily brought the eruption under control in a few days. Treatment with this drug was continued for ten days more, then tapered gradually over a period of ten more days.

Comment: There are not many nurseries that grow Algerian ivy from cuttings. One large wholesale nursery will supply many retail nurseries with plants. This explains why, although millions of these plants are handled by retail nurseries, very few of the employes get dermatitis from handling the plants. In nurseries where Algerian ivy is propagated from cuttings, however, dermatitis is definitely a problem. Case 6 also illustrates the cross sensitivities between Algerian ivy and its variants



Figure 2.—Some common variants of Algerian ivy: (1) is from an English ivy plant—so that size may be compared; (2) is from Hahn's ivy; (3) is a leaf of needlepoint ivy; (4) is known as glacier ivy; (5) is gold dust ivy. There are many other variants of Algerian ivy, but these are among the commonest in California. All these plants may cause dermatitis.

(Figure 2). When a person becomes sensitive to one member of this family of plants, he is usually sensitive to the other members of the family as well.

All the remaining six cases of Algerian ivy dermatitis that I observed occurred in persons who had trimmed the plant 24 to 48 hours before the onset of dermatitis. There were no cases of delayed reactions such as sometimes occur with poison oak. All these cases developed in the spring after the rainy reason had stopped and the ivy went into its seasonal spurt of growth. In every case there was a history of cutting the plant with clippers. The sites most frequently involved were the tops of the hands, the under surfaces of the wrists, the face and the periorbital regions. There was no instance of dermatitis of the genitals, so often involved in poison oak dermatitis. The dermatitis ranged in severity from very mild. requiring no treatment, to moderately severe. In no case was it as severe as a severe case of poison oak dermatitis. The best treatment was administration of prednisone by mouth or corticotropin parenterally. Topical agents had no effect on the eruption. In one of the cases the disease was caused by the variegated type of Algerian ivy (Figure 1); in the others, by plain Algerian ivy.

DISCUSSION

Dermatitis from English ivy, a very close relative of Algerian ivy, has been previously reported.[1,8,9] I have not observed dermatitis from this cause, al-

though English ivy is also very common in Southern California. The most logical explanation would seem to me to lie in the fact that English ivy—in fact, all of the other types of Hedera ivies—grow much more slowly than does Algerian ivy. Consequently the need for trimming it will arise much less frequently. Furthermore, the leaves and stems of Algerian ivy, because they are larger, release more juice when they are crushed than do the other members of the Hedera class.

It is interesting that there was no dermatitis of genitals or of the covered parts of the body in the present series. The reason for this is probably found in the manner in which the disease is contracted. Almost invariably the person in whom this disease develops has been working in his own yard. Usually only his hands will be contaminated with the juice, which, being water soluble, is removed when he washes his hands. It is doubtful that his clothes are heavily contaminated with the juice, hence unlikely that other parts of his body would become contaminated in the process of removing them. In contrast, the person who contracts poison oak dermatitis has usually been out in the woods and doubtless has a heavy contamination of clothing as well as of exposed skin.

For the patch test, juice from crushed stems and some crushed leaves should be applied to a small gauze square lightly moistened with water. This square should be covered with a larger piece of gauze and the whole applied to the inner surface of the upper arm. The test site should be examined 24 hours later and the gauze remoistened. Usually positive reaction will be observed about 36 hours after the original application. The patient will have burning and itching at the site of the patch, usually during the second night. If the patient has had severe dermatitis, it is best to have him remove the patch as soon as these symptoms appear, lest the reaction become intense.

As to what to do about sensitivity to Algerian ivy, I usually suggest to the patient he trim the ivy only with long-handled clippers, and that he wear gloves and not touch any of the cut pieces of ivy while they are being cleared away. The trimmers should be washed in running water after use, and clothes worn during periods of exposure should be put into the laundry. Except for unusually sensitive persons these measures will prove sufficient. There is one report in the literature of a patient who was desensitized to English ivy by injections of an extract of leaves of the plant.[9] This seems a rather troublesome procedure for a condition so easy to prevent. My experience with one patient (Case 3) was such that I would not expect desensitization injections to be of benefit.

In the present series of cases, the only effective treatment was with corticosteroid agents. The eruption did not respond to topical therapy. One patient (Case 3) had no response to prednisone, but was relieved by corticotropin gel injections. It might be wise to try corticotropin gel if cortisone by mouth is not effective within the first day or two. A dosage of 20 mg. of prednisone daily was usually sufficient to reduce the dermatitis to a tolerable level within two or three days. I begin to taper the amount of prednisone by 2.5 mg. daily as soon as the symptoms are relieved. A few patients will need the larger dosage for a week or ten days before symptoms are controlled. The dosage of the corticosteroid must be tapered slowly. One patient stopped taking it abruptly and a generalized urticaria developed—a cortisone withdrawal reaction—but he responded immediately when prednisone was reinstituted at 20 mg. daily and then was gradually reduced.

It seems that Algerian ivy dermatitis is a milder disease than poison oak dermatitis, but in two patients in the series it was as severe as attacks of poison oak which they had experienced. Persons without an "allergic disposition" may acquire sensitivity to this plant, but in this series persons with history of other allergic disease usually had more severe attacks (Case 2).

Algerian ivy does not cause dermatitis on first contact. Repeated exposures are needed to induce an allergic response. Twelve persons tested for sensitivity to the plant did not react to it.

Apparently it is the juice from broken leaves and stems which contains the irritant factor. Even persons sensitive to the irritant handled unbroken leaves with impunity.

English and Algerian ivy (Figure 1) are closely related species belonging to the Umbelliflorae, Order 45 of Division 3 of the plant kingdom.[2] This order contains three sub-groups, the Araliaciae (sometimes called the ginseng family), the Umbelliferae, and the Cornaceae (the dogwood family). The Hedera (the true ivies) belong to the Araliaciae, of which five species are cultivated. Other members of the Araliaciae will cause dermatitis. The Umbelliferae, very closely related to the Araliaciae, include several plants capable of producing dermatitis—namely carrots, parsley and parsnip, and others such as the various hemlocks and fool's parsley, which may cause death if taken internally.[7]

Many plants that are called ivies are not related to the Hedera. For example, Kenilworth ivy, Boston ivy, German ivy (sometimes also called Japanese ivy), ground ivy, marine ivy and cape ivy are not true ivies (i.e. Hedera).[2] They are not related to each other and have not been reported to have

caused dermatitis. Poison ivy and poison oak are not related to the Hedera. Neither is the common house plant known as philodendron. However, philodendron may cause dermatitis.[4,5]

65 North Madison Avenue, Pasadena 1.

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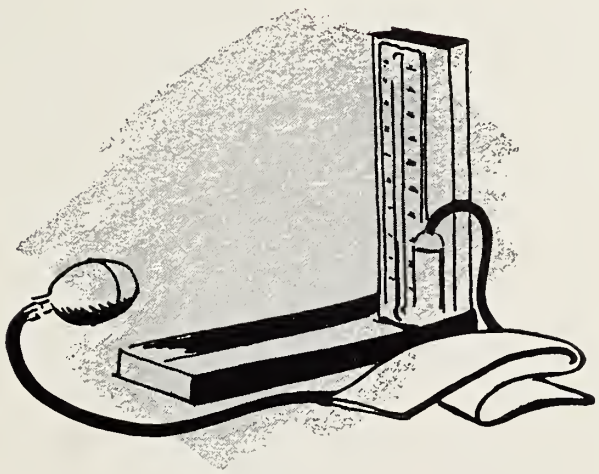
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Disaster Planning in Support Areas

FRANK F. SCHADE, *M.D.*, Los Angeles

• **It is probable that in the event of thermonuclear attack, the outlying areas to which metropolitan evacuees would be sent would have problems quite as great as the problems at the center of attack. Unless the focus of planning is altered, they could have great numbers of casualties sent to them, yet have far from adequate facilities, materiel and personnel to do the job.**

A RECENT ARTICLE in this journal[1] emphasized the necessity of all county medical societies in California having disaster plans. It was directed especially to the smaller societies that would not be presumed to have primary targets within their county but that nevertheless would be faced with the problems of caring for the victims of a local disaster or assisting in the care of casualties following major disasters affecting the state. The scope of the article was such that this latter aspect could not be sufficiently developed.

In the past, planning was largely restricted to the many aspects of the medical problems of disaster in the major cities. The development of thermonuclear weapons necessitated a reevaluation of destruction and damage potential, as well as casualty estimates. These are so great that the old target concept of ground zero—that is, the point immediately below detonation—with zones of destruction and damage around it have been supplanted by critical target areas and danger zones that cover hundreds of square miles, containing hundreds of thousands to millions of people. The greatest hope lies in the possibility of evacuating large segments of the population from the danger zones before an attack. How much time would be available for this is problematic and is a purely academic question.

The radically different concept dictates that the focus of attention now has to shift from the metropolitan areas to less densely populated parts of the state, the so-called support areas. At best, the support areas will receive hundreds of thousands of persons evacuated from their usual places of residence. Included among the evacuees will be hundreds of hospital patients who will require care in the hospitals of the support areas or at least some degree of medical supervision in mass care centers. The burden would be greatly increased if some of the cities should be attacked, for then many thousands of casualties would have to be sent to the support areas for definitive care. Add the possibility of dangerous degrees of radiation from fall-out, and the worst possible situation is at hand.

County medical societies must keep all these possibilities in mind when doing their disaster planning. The counties that will be called upon to bear these overpowering burdens are those that are least capable of doing so. Their resources of professional personnel, of facilities and of supplies and equipment are usually about sufficient to provide for the usual requirements of the local citizens, and not much more.

Waves of people suddenly pouring into these areas will increase the population many fold. Evacuees can never take much food and clothing with them, so they will be dependent upon the receiving areas for many of these essentials.

Tremendous public health problems are the natural expectancy. Evacuees will be crowded into inadequate shelters with few of the usual comforts. Great increases in upper respiratory and communicable diseases must be anticipated. There of course will be the usual medical and surgical conditions that occur at all times, and the incidence of some of them, such as gastrointestinal disorders, probably will be increased. It must be expected that the obstetrical load will increase considerably.

Sanitation facilities will be severely overtaxed. In many places a complete breakdown of the systems must be anticipated. Crude, makeshift methods of waste disposal will have to be employed. Garbage and refuse disposal would also be problems of importance that could be difficult to solve.

Inadequacy of even so routine a service as water supply may seriously threaten the welfare and even the health of the many people resident or temporarily in the areas. The provision of safe, potable drinking water can be a difficult problem.

Food supply and food sanitation, in light of the expectable shortages, lack of refrigeration and makeshift methods of preparation, will require close medical supervision.

As a further complication, in these counties that are likely to have enormous public health problems, there are very few physicians and technicians who have any public health training. Personnel of the State Department of Public Health is so limited that very little reinforcement can be expected from that source.

Submitted October 20, 1958.

The purely medical problems of care of the evacuees, management of mass casualties and what must be reduced to minimal essential medical services for the resident population, in themselves appear to be staggering. Not to be overlooked are the additional possibilities of dealing with the effects of chemical or biological agents, as well as the radioactive fall-out hazard.

Plans have been made for state-wide disaster medical services by the Medical and Health Division of the California Disaster Office.[2] Each of the three regions into which, for this purpose, the state is divided has a general plan and a medical plan.[3] The detailed implementation of plans and the business of carrying them out is to be done in the individual communities, the county being the first level of coordination for the provision of support and mutual aid. Many items of supply and equipment, such as first-aid stations, water purification units, blood bottles and emergency hospital units have been procured by the State Disaster Office and have been positioned in what is thought to be strategic locations. It is expected that there will be physicians, nurses and technicians among the evacuees to reinforce the meager personnel resources, but to assemble and assign these persons will take time.

It is incumbent upon the county medical societies to take the lead in the development of the medical defense plans for the counties. The physicians of the county, by their training, familiarity with the health and hospital facilities and their everyday experience, are best qualified to do the medical planning. The planning can be accomplished by the county society Civil Defense and Disaster Committee, working in close cooperation with the constituted authorities. Planning must go far beyond preparation for local disasters, however, and must include provisions for the most important support missions, with emphasis upon the first acute phase, before outside help is available.

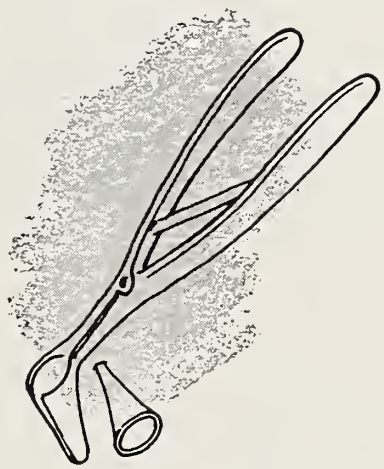
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CASE REPORTS

Hyperplasia of Brunner's Glands

MAURICE L. VAN DER REIS, M.D.,
LEO VAN DER REIS, M.D., and
B. VICAS, M.D., San Francisco

In 1941 Robertson[8] published a comprehensive study on the pathological processes which may occur in Brunner's glands. This work was the basis for the radiologic differentiation between duodenal adenomata and Brunner's glands hyperplasia.

Erb and Johnson[3,4] in 1948 reported the case of a patient with gastric hyperacidity in whom, on roentgenographic examination, persistent opacities in the duodenal cap were demonstrated. At laparotomy the duodenal mucosa appeared to have a "cobblestone" pattern. Upon histologic examination hypertrophy of Brunner's glands was noted. After extirpation of the duodenal bulb and pylorus, a stomal ulcer developed, necessitating subtotal gastric resection. The absence of an ulcer in the presence of high gastric acidity before the first operation and the occurrence of an ulcer after removal of the hypertrophic glands led to considerable speculation about the possible protective action by the secretions of Brunner's glands. Other cases substantiating the earlier observations have appeared in the literature[2] since.

REPORT OF A CASE

A 40-year-old, white cab-driver had epigastric distress, nausea and occasional vomiting of three years' duration. Shortly after the onset of symptoms a regimen of antacids and bland diet was prescribed and the symptoms were almost completely relieved. Gastrointestinal x-ray studies at that time did not show evidence of ulceration but had been interpreted as showing an inflammatory process in the duodenum (Figure 1). During the years the patient's complaints had remained essentially unchanged in character but had increased in severity and frequency. The patient said he had not had weight loss, hematemesis or melena.

Upon physical examination pronounced mid-epigastric tenderness, greatest just to the right of the midline, was noted. The bowel sounds were somewhat hyperactive.

Submitted July 24, 1958.



Figure 1.—X-ray film interpreted as showing inflammatory process in the duodenum.

Hemoglobin content was 15.5 gm. per 100 cc. of blood. Erythrocytes numbered 5.2 million per cu. mm. and leukocytes 9600 per cu. mm. with the cell differential within normal limits. No abnormalities were noted in urinalysis. Stool specimens were negative for occult blood. Without histamine stimulation, gastric analysis showed hyperacidity, the highest readings being 62 degrees of free hydrochloric acid and 76 degrees of total acid.

Roentgen examination consisted of studies of the esophagus, stomach and small bowel. During fluoroscopy and on the films taken (Figure 2) the duodenal cap showed multiple radiolucent areas. The defects within the duodenum measure anywhere from 0.5 centimeters to several centimeters in diameter. No areas of ulceration were noted. The mucosal pattern in the stomach was somewhat coarse. The remainder of the examination showed no abnormalities. The appearance of the "swiss-cheese"



Figure 2.—Multiple radiolucent areas at the duodenal cap.

pattern in the duodenal cap was strongly suggestive of hyperplasia of Brunner's glands.

A bland diet was prescribed. In addition to an antacid agent which the patient had taken previously, an anticholinergic drug, methscopolamine bromide, to be taken before meals and at bedtime was prescribed. The patient became completely asymptomatic within 48 hours and had no recurrence of symptoms.

DISCUSSION

Brunner's glands are abundant from the pylorus to the ampulla of Vater. There are none beyond the duodenojejunal junction. Histologically they are similar to the ramifying, tubulo-alveolar pyloric glands of the stomach. They are located in the mucosa and submucosa. The size varies from 0.2 to 5 millimeters in diameter, the largest usually found in the first portion of the duodenum and the sizes then decrease distally. The glands secrete a mucus-containing viscid fluid. Passage of hydrochloric acid over the duodenal mucosa causes a pronounced increase in the secretion of the glands, which eventually depletes the mucin content of them (Florey and Harding[5]). It has also been shown that the mucosa of the duodenum possesses a higher resistance to acid than that of either the jejunum or ileum. Florey and Harding as well as Ivy and coworkers[7] expressed the opinion that the secretions of Brunner's glands offer a protective mechanism against ulceration and that a defective mechanism may dispose to ulceration.

The differentiation between Brunner's glands hyperplasia and duodenal adenomata deserves consideration. Adenomata of the duodenum are commonly listed as the most frequent benign tumor of the duodenum. Bockus[1] said that 50 per cent of such tumors possess the structure of Brunner's glands. Robertson,[8] on the other hand, contended that the majority of "so-called adenomata" are really hypertrophy and should therefore be regarded as not related to neoplastic growth. One major point of differentiation between hyperplasia and adenomata is the continuity of the hyperplastic glands with the surrounding mucosa and the absence of encapsulation or a central stalk in this entity.

It has been estimated that some 6 or 7 per cent of small bowel tumors eventually show malignant change. The incidence of carcinoma arising in Brunner's glands is therefore of interest and importance. Wilensky,[10] in a review of the literature, collected reports of 46 cases of tumors of Brunner's glands, all of which were benign. Stewart and Lieber[9] reviewed 104 cases of carcinoma of the duodenum. Questionable evidence of origin in Brunner's glands was reported in three cases; in no case was there concrete evidence to that effect.

Radiologically, in cases of hyperplasia of Brunner's glands, multiple filling defects are observed within the first and second portions of the duodenum. The defects are sharply defined and, in most cases, appear to be sessile. They are largest and most numerous in the area of the bulb, where a "swiss-cheese" pattern can be observed. In addition, non-specific hypermotility and coarsening of the gastric folds may be observed. There is no evidence of ulcer formation, and spasm and irritability, as well as impairment of flexibility of the bulbar walls, are virtually absent.

DIFFERENTIAL DIAGNOSIS

Clinically symptoms in cases of hyperplasia of Brunner's glands are absent or if present are similar to those observed in peptic ulcer, duodenitis and other gastrointestinal diseases, which can cause a syndrome of "dyspepsia." Radiologically, multiple radiolucencies may be seen in cases of adenomas, hemangiomas and lipomas.[1] Only with adenoma, however, is the pattern somewhat similar to that of hyperplasia of Brunner's glands. Since the likelihood of true adenomata arising from Brunner's glands appears to be remote,[8] the differential diagnosis is narrowed down to distinguishing hyperplasia from adenomatous mucosal polyps. Demonstration of pedicles or the presence of polyps in other portions of the small bowel or stomach would be an indication to treat the patient as having polyps of the duodenum. An additional differential

point indicating polyps is achlorhydria, whether in the absence or in the presence of the foregoing distinguishing features. Duodenitis would appear to be the only inflammatory condition capable of simulating hyperplasia of Brunner's glands. Duodenal inflammatory changes *per se* rarely occur. It might be more difficult to differentiate duodenitis from hyperplasia if changes in the pattern of the gastric mucosa suggest the probability of a similar pattern in the duodenum. The following signs may be helpful in differentiating duodenitis from hypertrophy of Brunner's glands: (a) bulbar irritability, with or without spastic deformity, (b) inconstancy in size and shape as well as position of the radiologic defects, (c) obliteration of the radiolucencies on compression and (d) regression of the x-ray manifestations on therapy. It is well to remember that unless hyperacidity is present, hyperplasia of Brunner's glands is unlikely.

SUMMARY

A case is reported of radiologically proved Brunner's glands hyperplasia. This diagnosis can be made in a patient with a history of dyspepsia, with gastric hyperacidity and in whom multiple radiologic defects with a nodular pattern can be observed.

Conservative treatment with diet, antacids and anticholinergic drugs appears to be quite satisfactory. Surgical intervention does not seem to be indicated, since the hypertrophic glands appear to afford a protective mechanism against the action of hydrochloric acid, and perhaps more important, since the duodenal changes in this entity may be regarded as a benign process.

2515 Ocean Avenue, San Francisco 27 (M. L. van der Reis).

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High Pressure Patent Ductus Arteriosus

A Report of Three Cases

JEROME HAROLD KAY, *M.D.*, ROBERT M. ANDERSON, *M.D.*, JOHN E. MEIHAUS, *M.D.*, and REUBEN LEWIS, *M.D.*, Los Angeles

Most cases of patent ductus arteriosus are characterized by a machinery-like murmur heard during systole and diastole at the left second intercostal space. An x-ray film of the chest shows engorged lung fields, a prominent pulmonary artery segment and an enlarged ascending aorta. Electrocardiographic tracings give evidence of left ventricular strain and hypertrophy, followed, in the more pronounced cases, by right ventricular hypertrophy. A definitive diagnosis can usually be made by cardiac catheterization showing an increase in the oxygen content of the pulmonary artery. The increase is usually most pronounced in the left pulmonary artery.

The following report is based on the diagnosis and surgical treatment of three patients with pronounced pulmonary hypertension due to a patent ductus arteriosus. The pressure in the pulmonary circulation in two of these patients was as high as it was in the systemic circulation, and in one it was two-thirds as high as the systemic pressure.

REPORTS OF CASES

Case 1. The patient was a girl 6 years of age. At the age of 18 months the mother noted that the child became very tired, especially at the end of the day. She was short of breath. At the age of two years, the patient complained of substernal pain which was intermittent and unrelated to exercise. The child had turned blue on occasion. She had frequent respiratory tract infections and was undernourished and ate very poorly. The patient had been receiving digitalis for heart failure for several years.

On physical examination the heart was observed to be very much enlarged, the left border being at the anterior axillary line in the sixth intercostal space. There was usually only a grade IV systolic murmur but at times a grade II diastolic murmur also could be heard at the left second and third intercostal spaces. P_2 was three times as loud as A_2. The blood pressure was 130/0 of mercury. The hemoglobin content was 11.8 gm. per 100 cc. of blood. Erythrocytes numbered 4.2 million and leukocytes 10,850 per cu. mm. No abnormality was noted in the urine. In an x-ray film of the chest, pronounced right and left ventricular enlargement were observed. The pulmonary vessels were engorged and pulsated actively. The pulmonary outflow tract was prominent. An electrocardiogram was interpreted as showing left atrial and left ventricular enlargement.

From the Cardiovascular Research Laboratory, Department of Surgery, University of Southern California School of Medicine and The Saint Vincent's Hospital, Los Angeles, California.

Aided by a grant from The American Heart Association.

Submitted August 7, 1958.

Cardiac catheterization was performed and the femoral artery pressure was 135/55 mm. of mercury with a pulmonary artery pressure of 80/50 mm. The right ventricular pressure was 80/4 mm. There was a 4 volumes per cent increase in oxygen saturation of the blood in the pulmonary artery compared with the atrial specimens. Just beneath the valve in the right ventricle there was a 2 volumes per cent increase in oxygen saturation of the blood as compared with the rest of the right ventricular specimens. A patent ductus arteriosus was visualized in a retrograde aortogram.

On October 24, 1957, the patent ductus arteriosus was divided. It was 1.5 cm. in diameter and 0.75 cm. in length. The patient gained weight after the operation and, in contrast to her preoperative status, was able to play with friends without tiring. X-ray films showed a decrease in the cardiac silhouette and in the pulmonary vascular markings. The edge of the liver, palpated five fingerbreadths below the costal margin before operation, was felt at the costal margin after the patient recovered.

Case 2. The patient, a girl 4 years of age, had had pneumonia when 18 months old, and the mother was informed at that time that the patient had "a heart murmur." The patient frequently had respiratory tract infections and exertional dyspnea. She had never been digitalized.

On physical examination it was noted that the heart was enlarged to the anterior axillary line at the sixth intercostal space. There was a grade VI systolic thrill and a typical machinery-like murmur heard at the left second and third intercostal spaces. At times, however, only a systolic murmur could be heard. The edge of the liver was felt four fingerbreadths below the right costal margin.

The hemoglobin content was 13.8 gm. per 100 cc. of blood. Erythrocytes numbered 4.7 million and leukocytes 10,700 per cu. mm. Results of urinalysis were within normal limits. Fluoroscopic examination showed the heart to be enlarged anteriorly and posteriorly to the right, and also to the left. The pulmonary arteries and peripheral pulmonary vessels pulsated vigorously and appeared to be more prominent on the right than on the left. An electrocardiogram was interpreted as showing left atrial enlargement and a suggestion of right ventricular hypertrophy.

Right heart catheterization was done on January 29, 1958. The right ventricular pressure was 145/4 mm. of mercury. The catheterization did not reveal any evidence of a ventricular septal defect. As the catheter could not be passed into it, pulmonary artery specimens were not obtained.

The ductus was divided on February 25, 1958. It was 12 mm. in diameter and in length. The edge of the liver, which was four fingerbreadths below the costal margin before operation, was three fingerbreadths below immediately afterward, and six hours later it could not be palpated. The patient did well after recovery. When last observed she was playing normally and was gaining weight.

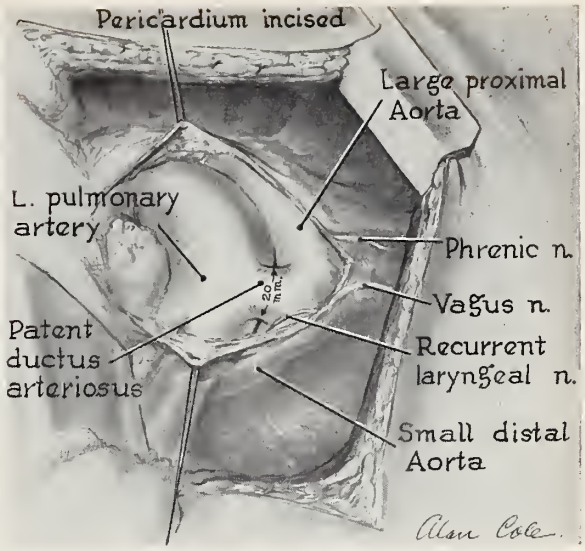


Figure 1.—Artist's drawing of large patent ductus arteriosus in Case 3. The pulmonary artery pressure was equal to systemic artery pressure.

Case 3. The patient was a 12-year-old girl who was reported to have had a "heart murmur" first noted at the age of six weeks. Cyanosis was noted at the age of six years on a hot day after the patient had been playing very strenuously, and again at the age of eight years. She usually rested in a squatting position up to the age of eight years but not after that. Shortness of breath on exertion was frequently noted. The patient had been receiving digitalis for four years.

The heart was enlarged to the anterior axillary line in the sixth intercostal space. P_2 was four times as loud as A_2. There was no diastolic murmur. The liver was palpated two fingerbreaths below the costal margin.

Cardiac catheterization was carried out. The pressure was 130/0 mm. of mercury in the right ventricle and 130/80 mm. in the pulmonary artery. The oxygen saturation of the blood in the pulmonary artery was four volumes per cent higher than in the blood in the right ventricle.

On March 5, 1958, the ductus was divided (Figure 1). It was 20 mm. in diameter and 5 mm. long. The patient did very well and returned to full activity.

OPERATIVE TECHNIQUE

The technique used in these cases was as follows:

The patient was placed in the posterior lateral position and entrance into the chest was made through the fifth intercostal space on the left side. The ductus arteriosus was isolated. Care was taken not to injure the vagus nerve, the phrenic nerve or the recurrent laryngeal nerve. Potts clamps were placed on the aortic side of the ductus and on the pulmonary artery side of the ductus. The ductus was partially divided and a 4-0 arterial silk mattress

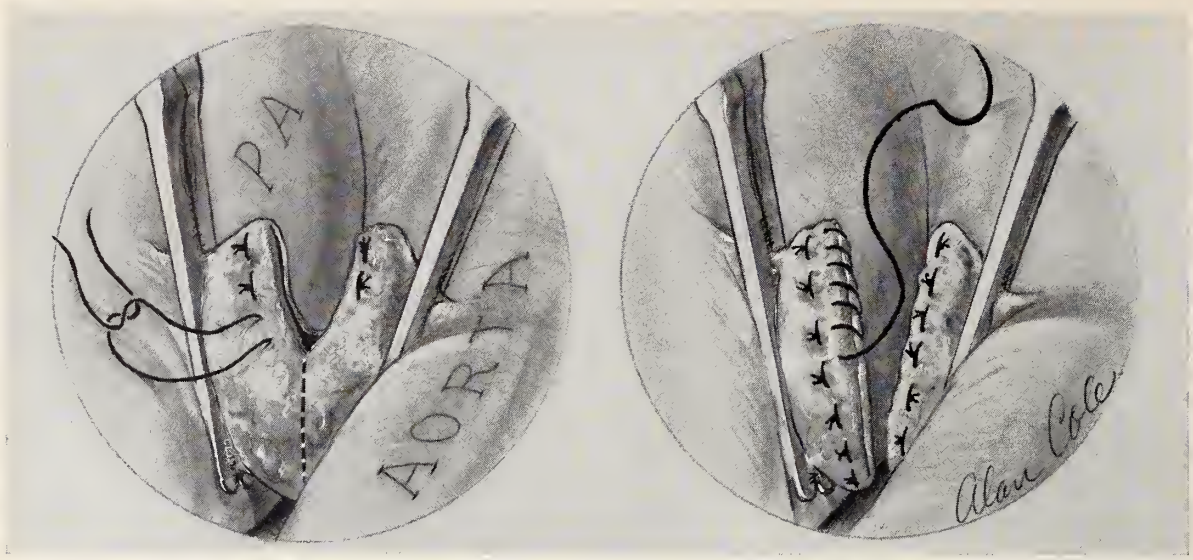


Figure 2.—Safe method of division to patent ductus arteriosus.

suture was placed on the severed end of the ductus near the aortic side and another similar suture was placed on the pulmonic side. Further division of the ductus was then carried out and more mattress sutures were placed on each side. The procedure was continued until the ductus was completely divided. Then each end of the ductus arteriosus was further secured by two rows of continuous 5-0 arterial silk (see Figure 2). This technique is essentially that described by Bosher[1] for the safe division of a patent ductus arteriosus.

DISCUSSION

The first successful operative procedure for patent ductus arteriosus was performed in 1939 by Gross.[3] Since then, the technique has been improved by various surgeons. At present, most investigators agree that all patients with patent ductus arteriosus and a left to right shunt should have surgical correction of this lesion. The operative mortality is lower than the risk of subacute bacterial endocarditis and heart failure. The operative mortality is less than one-third of 1 per cent.

The diagnosis of patent ductus arteriosus is not difficult if the typical murmur is present. However, Damman and Sell[2] in 1952 reported that patients with high pressures in the pulmonary artery caused by a patent ductus arteriosus may have only a systolic murmur.

Cardiac catheterization should be done in all cases in which the diagnosis is not definite. However, at times it may be impossible even with catheterization to distinguish between a ventricular septal defect, an aortic septal defect and patent ductus arteriosus. Because of this, in the first of the three cases herein reported it was necessary to carry out retrograde aortography by inserting a needle into the femoral artery, passing a catheter through the needle into the ascending aorta and injecting radiopaque dye while taking multiple films rapidly. This technique outlined the patent ductus arteriosus very well and differentiated this lesion from a ventricular septal defect and an aortic septal defect.

SUMMARY

Three patients with patent ductus arteriosus in whom, at cardiac catheterization, the pressures in the pulmonary artery were extremely high, are presented. In two patients the pressure was as high in the pulmonary artery (130 mm. of mercury) as in the systemic circulation, and in the third patient the pressure was two-thirds as high. The patients all were greatly improved after the ductus was divided.

2212 West Third Street, Los Angeles 57 (Kay).

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EDITORIAL

Medical Care for the Aged

ONE OF THE MAJOR PROBLEMS facing the medical profession of the United States today is the provision of adequate medical and hospital services for the aged citizens.

The problem has been placed before the Congress —the last Congress, that is—by Representative Aimee Forand, a Rhode Island Democrat. who proposed an extension of the Social Security Law to give hospital, nursing home and surgical services to social security beneficiaries.

While Mr. Forand's bill failed to get out of committee in the last Congress, there is every indication that it will be reintroduced in the present Congress and that it may stand a better chance of passage than it had two years ago.

Whether or not his bill passed Congress, Mr. Forand placed his finger on one segment of the American population which has been left out of many voluntary health insurance plans and in which the need for medical and hospital services is variously estimated as from two to three times the need in lower age groups. When his proposals are combined with the ever-present tendency of government bureaus to expand, it is obvious that the demand for government to enter this field of security will be kept alive and increased in the current Congress and in future sessions.

Washington reports today indicate that more than a demand for social security coverage for the older population group is involved in this problem. For one thing, there are a lot of new Congressmen who were elected last November on a "liberal" platform. Arrayed against these are some older and more conservative members who are possibly more acutely aware of the broad social aspects of additional social security legislation, especially in the financial facet. With a government already deeply in debt, with new taxes demanded to cover a budget which a Republican president has presented with every anticipation of opposition wherever spending cuts appear, and with the public becoming daily more tax-conscious and tax-resistant, some of the older heads in Washington are reported as fearful that further increases in social security taxes may engender a popular public revolt.

Supporting the type of legislation which would give new and added benefits to older people is the American Federation of Labor-C.I.O. organization, a strong political body which is currently reported as saying that many Congressmen gained office through labor support and that they will be asked to repay this debt with labor-favored legislation.

A month ago the A.F.L.-C.I.O. announced that social security benefits of hospital and medical care for older citizens was number four on labor's legislative program. Two weeks later, it had moved to the number three spot and today is reported to be the number one "target" of labor in the welfare field, a field which is one of the most carefully tended in labor's overall legislative agenda.

With this background, medicine is faced with the need of deciding what to do, how to do it, and when. The American Medical Association has taken preliminary steps to encourage the provision of voluntary health insurance coverage, at reduced professional fees, for the over-65 age group. Private insurance companies, under the impetus of Continental Casualty Co., and including Fireman's Fund of San Francisco are starting to write a voluntary policy which offers a measure of coverage to older people but does not pretend to cover the entire cost of the care they may need.

Ten years ago, when a comprehensive plan of compulsory health insurance was before Congress. the medical profession and private insurance interests were able to stave off the frontal attack. As a result, time was gained to permit medical and private interests further to develop voluntary health

insurance plans. That this time has been well spent is attested by the fact that more than 70 per cent of the American public today has some coverage for hospital, medical and surgical bills.

Today, with the approach made obliquely and not frontally, and with only one segment of the people involved—and that segment a sentimental favorite —there is grave question as to whether additional time may be secured for private enterprise to do the preliminary studies necessary before it can enter a field in which no one has experience and costs are unknown.

If the supposition may be made that Congress will, in the next two years, seriously consider legislation extending federal assistance to the older-age group in meeting their medical and hospital bills, the medical profession will be faced with making a decision as to its own stand.

Should such legislation be opposed frontally and with finality? Should medicine exert all its efforts to the defeat of such a proposal, in the knowledge that if its fight fails it may be confronted with something even worse than it had imagined?

As another alternative, should medicine just ignore the legislative threat and supinely accept whatever comes out of Congress?

Or, should medicine get into the picture and attempt to guide the content and the progress of this type of legislation, in the belief that a better end product might result? Should the old adage of joining those whom you can't defeat be applied?

These questions are being asked of physicians by physicians today. There are advocates of each of the three routes suggested above. There are also opponents of each.

Obviously, these questions are due to be thrashed out in the A.M.A., in the state and territorial medical associations and in the county medical societies in the next twelve months—if, indeed, there is that much time left for reaching decisions.

The California Medical Association already has these questions in mind and has taken some preliminary steps to try to reach an answer which will, at one time, meet the government-labor-public demand for care for old people and establish a system under which physicians may practice their profession with at least a close approximation to the methods for which they were trained and to which they have become accustomed.

There is no comfort in facing a situation where the profession must come up with an adequate answer of its own in order to stave off something that government might dream up which would be incalculably worse. Yet, it seems incumbent on the medical profession today to bring out an answer to a problem.

Letters to the Editor . . .

Heart Disease in Transport Workers

Editor, California Medicine:

Several friends have written us about the exceedingly interesting article by Dr. Rosenman and Dr. Friedman in your issue of September 1958 [The Possible Relationship of Occupational Stress to Clinical Coronary Heart Disease, page 169] in which they retabulated data in our paper dealing with the coronary experience of London transport workers.[1] In this paper it was shown that the drivers of London's buses suffered more coronary heart disease than bus conductors, and the drivers of the trams and trolleys more than *their* conductors. All these vehicles are double-deckers. Doctors Rosenman and Friedman have now shown that the conductors of the buses had a higher incidence of coronary heart disease than the drivers of the trams and trolleys, 2.0 per 1,000 compared with 1.72. This is quite correct, though allowance should of course be made for the differences in the age composition of the two groups of men. We have been back to the original data and the position is that under 50 years of age the tram and trolley drivers had more of all forms of the disease than the bus conductors, and at all ages they had a higher incidence of "sudden death," of not so rapidly fatal infarction, and of nonfatal infarction. But there was a gross excess of angina among the bus conductors at ages over 50, enough to produce an overall higher rate of the disease in them compared with the tram and trolley drivers. These figures all refer to the two years 1949-50 and they are rather small. We have now accumulated a few months short of 10 years' data (as well as much information on blood pressure, blood lipids, somatotype, etc.) and hope to publish further results in due course. Meanwhile it can be said that certain patterns seem to be established. The striking driver-conductor difference is in the most malignant form of coronary heart disease, "sudden death" as the first clinical manifestation under 50 years of age. This is running four times higher in the drivers than in the conductors; and the picture seems to be about the same in each group of drivers compared with either group of conductors. Other forms of the clinical disease have other rela-

tions to the men's work—an example of the identification of syndromes by epidemiological methods.[2] Several studies that have been carried out here show more, and more general, advantage to the physically active; and it may well be that there are special factors in the case of bus conductors. We cannot remember whether we did the particular "cross" that Doctors Rosenman and Friedman make, but do recollect that our main anxiety was to compare groups that were as like as possible to each other, differing only in their actual job. Hence our emphasis on the comparison of bus drivers with bus conductors and tram and trolley drivers with tram and trolley conductors.

Be all this as it may be we cannot see its connection with the hypothesis about the role of occupational and other social strains in the production of clinical coronary heart disease. To describe the buses as "downtown" and the trams and trolleys as "suburban" is quite wrong for London. The trams and trolleys did not serve Piccadilly and the Strand in 1949-50 though they came pretty close; but they did (and do) traverse most densely populated and built-up urban, and industrial areas with only too much of congestion, traffic jams, rush hours and the rest of it—if these are the strains Doctors Rosenman and Friedman are thinking of. London is a region and not an ordinary city. In fact the buses covered (and cover) more "suburban" areas in the usual connotation of that term than the trams and trolleys.

The hypothesis about nervous strain is today a highly important one and epidemiologists are very conscious that they have so far been able to make little contribution to its testing. It is not for lack of interest. Our paper which has already been quoted[1] showed that government office clerks, middle-grade executive officers in the Civil Service, and telephonists (with much night work), three groups of men with very different occupational strains, all had very similar experiences of coronary heart disease, and similar also to that of the bus drivers. Schoolmasters had no more than the men who serve behind the counters in post offices. The coronary experience of postmen (ours walk and cycle a lot) and of bus conductors was remarkably alike. It was observations like these that turned our minds to habitual physical activity, and its absence, as a possible common factor. The national necropsy survey of middle-aged men recently carried out in this country showed that ischaemic myocardial fibrosis in deaths from injuries, infections and cancers was as common in part-skilled light workers as in skilled, as common in these as in professional and business men,[1] and commoner in all of these than in active and heavy workers.[3]

The latest report on coronary heart disease published by our national office of vital statistics[4] showed that mortality ranged from 207 in radio and telegraph operators to 55 for agricultural workers. The occupations in the table had the worst records. The ratio for all men is 100 and only the most reliably based figures are quoted. These are mostly sedentary and "light" occupations in terms of physical activity, some with and some without obvious social and emotional strains.

Mortality from Coronary Heart Disease, Males Aged 20 to 64, inclusive, England and Wales, 1949-53

	Standardised Mortality Ratio
Radio and telegraph operators	207
Roman Catholic priests and monks	193
Dock and harbour officials, etc.	175
Chemists	169
Physicians	159
Commercial brokers, agents, etc.	156
Clergymen (Church of England)	153
Musicians	151
Managers and directors in communications (mainly post office)	149
Garment workers	149
Telephone operators	144
All men	100

The radio and telegraph operators ("other directed"?) are a very interesting group. Is this the archetypal modern man—on a high standard of living, sedentary, required to be at a chronic low alertness which is punctuated with spasms of nervous activity? There are no data on his smoking habits but they would be worth getting. The telephonists may be in the same category. The chemists, too, have characteristically twentieth century jobs and are probably an upwardly very mobile group (first appearance of the Lucky Jims?). But there is not much sign in this table of tycoons great and small, organization men, high or low pressure executives and vice-presidents. Business managers showed a ratio of 112 and company secretaries, 115; office clerical workers, however, 132. Bureaucrats did rather well with the top civil servants, ratio of 94—parkinsonism evidently is life-saving. The only "blue collar" group, the garment workers, is a very mixed one; and in general there is a striking absence of obvious labor victims of alienation—or automation. Foremen, the marginal men, ratio 99. These figures do not seem to take us very much further.

It is a pity that Dr. Breslow and Mr. Buechley were so brief and tantalising in their discussion of the probability that there are multiple important causes of coronary heart disease (same issue of your journal, page 175). European studies show an association between coronary heart disease and physical activity of work; several studies in the U.S.A. show none. Are different combinations of causes effective in the U.S.A. and in Europe? And are these related to the dreadfully high rate of coronary heart disease that is reported in the U.S.A. compared with

Europe and, in particular, with Scandinavia?[2] This could well be so. The investigation of occupational and other nervous strains may be illuminating, and it makes good sense that these should be sought first in the U.S.A. which is at a more advanced stage of technological development than Europe. Meanwhile, the first thing we would like to know is the comparative frequency of coronary atherosclerosis in these various populations. The findings on the American soldiers in Korea came as a shock to us here but we have no data yet on the prevalence of this condition in young Englishmen, soldiers or others.

The statement of Doctors Rosenman and Friedman that there was a sharp rise of myocardial infarction among British general practitioners[5] because they were "suddenly compelled by the then new system of medical practice to treat a remarkable number of patients" is without foundation. The National Health Service began in July 1948 and the increase of coronary heart disease among the general practitioners was substantial in 1947. Moreover, the increase in the volume of their work due to the new service was quite modest—about 10 per cent. In detail, comparing the figures for July 1946 to June 1948 with those of July 1948 to June 1950, the increase was 11 per cent and confined to office consultations; but there was also some increase in the number of general practitioners during this period. Interested readers should refer to[6,7,8]. Why the general practitioners and not the specialists suffered a sudden increase of coronary heart disease in 1947-50 is still quite unclear. None of the possible explanations that have been suggested has helped. At present one of our colleagues is making a study of the mortality of doctors in the National Health Service in relation to the nature of their work; and a special study of the general practitioners in relation to volume of work, partnership *versus* single-handed practice, town *versus* country practice, and so on. Results should be available in a few years.

Yours sincerely,

J. N. Morris, F.R.C.P.
P. A. B. Raffle, M.D.

London Hospital Research Laboratories,
London, E.1., England.

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Editor, California Medicine:

We have been privileged to comment upon the letter of Dr. Morris and Dr. Raffle. We are glad that they have confirmed our observation that their data, as originally published, indicated that the entire group of conductors of the buses had a higher incidence of *clinical* coronary heart disease than did the tram and trolley drivers. It is interesting that the authors, on reviewing their data, now find that if only drivers and conductors under 50 years of age are tabulated, apparently there are more instances of clinical coronary disease among the tram and trolley drivers than among the bus conductors. However, since no statistical data are presented in their letter, the latter difference in incidence may not be significant enough to justify any conclusion about its possible mechanism. Furthermore, it does not explain why both the conductors and the drivers of one particular route (which without question traverses the most heavily congested areas of London) have so much higher an incidence of clinical coronary disease than do comparable men working in other more peripheral routes. Certainly the conductors and drivers of buses in such congested areas have as much or more physical exercise as do those working in similar vehicles in other areas.

The difference in the incidence of myocardial infarction in the two groups is interesting but fails to indicate necessarily either the degree or the incidence of the coronary atherosclerosis substrate in the two groups. Thus, infarction may be only a fortuitous complication due either to coronary thrombosis or the absence of sufficient collateral circulation rather than a valid index of the presence or severity of underlying coronary atherosclerosis. Such determinants of infarction of course may be separate from and influenced by factors entirely or partly different from those leading to the substrate, coronary atherosclerosis. Conceivably exercise could influence such determinants, but emotional stress,

in particular relation to thrombosis, also must be considered as another possible determinant. This latter possibility particularly should be considered since the type of job stress of a bus driver, as everyone knows, differs so radically from that of a coin collector, namely, the conductor. Similar criticism also can be made with regard to the pairing of postal switchboard operators and postmen delivering domestic mail.

Finally, we would agree (J. Am. Med. Assoc., Correspondence Sec., Vol. 167, No. 2, page 252, May 10, 1958) with Drs. Morris and Raffle that it is extremely hazardous to attempt to use the type of position or job itself as a measure of the presence and degree of occupational tension *per se*. Rather the latter can only properly be assessed by determining the interaction of the individual himself with his particular environmental status. Such an assessment and the results of varying behavior patterns upon the incidence of clinical coronary disease recently has been made by us (Circulation, Vol. 18, No. 4, part 2, pages 721-722, Abstracts of the 31st Scientific Sessions, October, 1958).

Ray H. Rosenman, M.D.
Meyer Friedman, M.D.

For Your Patients—

A Personal Message to YOU:

As your personal physician I consider it both a privilege and a matter of duty to be available in case of an emergency. But, being only human you can understand that there are times when I may not be on call. I might be at a medical meeting outside the city, on a bit of a vacation—or even ill.

Consequently, I thought it would be a good precaution if—on this gummed paper which you can paste in your telephone book or in your medicine cabinet—I listed numbers where I can be reached at all times. Also, the number of a capable associate as an added service. Here they are:

_____	_____	_____
OFFICE	HOME	MY DOCTOR
_____	_____	_____
OFFICE	HOME	ASSOCIATE

Sincerely,

_____, M.D.

MESSAGE NO. 1. Attractive, postcard-size leaflets printed on gummed paper, you to fill in telephone numbers and your signature. Available in any quantity, at no charge, as another service to CMA members. Please order by Message Number from CMA, PR Department, 450 Sutter, San Francisco.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 442nd Meeting of the Council, Disneyland Hotel, Anaheim, November 8, 1958 and the 443rd Meeting, Pebble Beach, December 13, 1958

442nd Meeting

The meeting was called to order by Chairman Lum in the Disneyland Hotel, Anaheim, on Saturday, November 8, 1958, at 9:30 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Councilors MacLaggan, Wheeler, Todd, Foster, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Harrington, Davis, Sherman, Lum, Bostick and Teall, Speaker Doyle and Vice-Speaker Heron. Absent for cause, Editor Wilbur and Secretary Daniels.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Thomas, Clancy, Marvin, Whelan and Collins of C.M.A. staff; Messrs. Hassard and Huber, legal counsel; Messrs. Read and Salisbury of the Public Health League; Doctor Walter E. Batchelder, medical director of the Cancer Commission; county society executives Geisert of Kern, Rosenow of Los Angeles, Foster of Sacramento, Donmyer of San Bernardino, Nute of San Diego, Neick of San Francisco, Thompson of San Joaquin, Wood of San Mateo, Donovan of Santa Clara, DeVere of Stanislaus; legal counsel Fred O. Field of Los Angeles; Doctor William Gardenier and Mr. Wilson Wahlberg of California Physicians' Service; Doctors Thomas Elmendorf, Robert E. Ploss, Donald H. Abbott, Dwight H. Murray, J. Lafe Ludwig, Horace Sharrocks, John Keye, Dan O. Kilroy, James Yant, Malcolm Merrill; Robert L. Day and Carl Moore of Kern County and Francis G. Mackey, Richard A. Preston, Edgar E. Struve, William Wickett, L. E. Wilson, Elmer H. Thomassen and J. B. Price of the Orange County Medical Association.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 441st meeting of the Council, held October 11, 1958, were approved.

2. *Membership:*

(a) A report of membership as of November 6, 1958, was presented and ordered filed.

(b) On motion duly made and seconded, 33 delinquent members whose dues have now been received were voted reinstatement.

(c) On motion duly made and seconded in each instance, three applicants were voted Associate Membership. These were: Loyd W. Bond, Frank E. Hesse, Alameda-Contra Costa County, and Harold W. Nolen, Santa Clara County.

(d) On motion duly made and seconded in each instance, two members were voted a reduction of dues because of postgraduate study.

3. *Financial:*

A report of bank balances, etc., as of November 6, 1958, was presented and ordered filed.

On motion duly made and seconded, it was voted to authorize the Finance Committee to extend the payments due on a loan granted to a member.

4. *Public Welfare Assistance Law:*

Chairman Lum reported on a meeting held the preceding evening between the Committee on Legis-

FRANCIS E. WEST, M.D. President
T. ERIC REYNOLDS, M.D. President-Elect
JAMES C. DOYLE, M.D. Speaker
IVAN C. HERON, M.D. Vice-Speaker
DONALD D. LUM, M.D. Council Chairman
ALBERT C. DANIELS, M.D. Secretary-Treasurer
DWIGHT L. WILBUR, M.D. Editar
JOHN HUNTON Executive Secretary
General Office, 450 Sutter Street, San Francisco 8

ED CLANCY Directar af Public Relatians
Southern California Office:
2975 Wilshire Boulevard, Los Angeles 5 • DUnkirk 5-2341

lation, the Liaison Committee to the State Department of Social Welfare and the members of Reference Committee 3A of the 1958 House of Delegates. General agreement was reached at this meeting that the spirit and the intent of Resolution No. 1 of the 1958 House of Delegates are being followed by the appropriate bodies of the Association.

On motion duly made and seconded, it was voted that the official policy of the Association should be that the administration of the Public Welfare Assistance Law should be handled at the local level.

On motion duly made and seconded, the following resolution was adopted:

Resolved, (a) That the Commission on Medical Services be instructed to incorporate into a continuing study of medical care plans an immediate crash program to suggest recommended principles for guidance of the C.M.A. Council in its consideration of current labor medical care programs, tax-supported governmental medical care programs and other governmental intervention into the private practice of medicine, as well as closed-panel plans; and (b) that in this program the Commission on Medical Services work in close liaison with the newly created C.M.A. Bureau of Economic Planning and Research.

5. *Committee on Legislation:*

Mr. Hassard reported that a new legislative measure had been prepared to secure adequate investigation of proposed cancer treatments and that legislators who had opposed this type of legislation in the past were apparently in favor of this new draft. On motion duly made and seconded, it was voted to introduce or to support this measure if introduced by others.

Doctor Kilroy reported that the dentists have sponsored legislation which would place the licensing of the healing arts professions under a separate department through a reorganization of the present Department of Professional and Vocational Standards. It was agreed to support this proposal or, if it should fail, to seek licensure of the healing arts under a new division of the State Department of Public Health.

Doctor D. H. Murray, former legislative chairman, reported that plans are now in operation for the screening of graduates of foreign medical schools in their own or other foreign countries. He urged that the state maintain its own standards in licensing of medical school graduates, including the present provisions for reciprocity on licensing. On motion duly made and seconded, it was voted to reaffirm the Association's earlier stand on this subject, in conformity with existing laws.

Discussion was held on a resolution adopted by the 1957 House of Delegates which sought to have all legal and other costs be made a part of the court record in liability cases. It was agreed to refer this matter to the Liaison Committee to the State Bar of California.

Reporting on the consideration given to resolutions adopted by the 1958 House of Delegates, Doctor Kilroy reported and the Council acted as follows:

Resolution No. 67, relative to the Nursing Practice Act—moved, seconded and voted to refer to the Committee on Other Professions.

Resolution No. 1, public welfare assistance—moved, seconded and voted to authorize the committee to sponsor legislation to require local public welfare boards to appoint physicians as members.

Resolution No. 40, relating to tax deductions for medical expenses—it was agreed that the committee should seek to make these deductions for state income tax purposes the same as for federal taxes.

Resolution No. 47, relating to tax deductions for expenses of higher education—agreed to defer action pending needed changes in federal legislation.

Resolution No. 3, relative to seat belts in new automobiles—moved, seconded and voted to sponsor legislation embodying this requirement.

Resolution No. 52, relative to special insignia for physicians' cars—no action needed; existing laws make this provision.

It was regularly moved, seconded and voted to sponsor legislation to secure legal privilege for physicians' records used in infant mortality and morbidity studies.

It was regularly moved, seconded and voted that the Council address a letter to all county societies, scientific sections and commissions and committees, calling their attention to the need for channeling all proposed legislation through the Council and the Committee on Legislation.

Doctor J. Lafe Ludwig, a member of the Committee on Legislation of the A.M.A., reported that labor legislative advocates have given a high priority to legislation to provide hospitalization and medical care to the aged on a federal basis.

6. *Committee on Mental Health:*

Doctor Stuart Knox, chairman of the Committee on Mental Health, presented a report on a proposed legal definition of insanity to be used in criminal cases. It was agreed to postpone action on this topic until the next Council meeting.

Discussion was held on the matter of privilege of psychiatrists' records and it was regularly moved, seconded and voted to refer this to the Commission on Professional Welfare as a part of its overall study of the matter of privilege.

Doctor Knox also reported on discussions held by the committee on the subject of narcotics. The committee felt, he reported, that the medical aspects of

narcotics addiction should be recognized in contradistinction to the criminal aspects of narcotic traffic. It was regularly moved, seconded, and voted that the Committee on Mental Health be empowered to meet with the heads of the Department of Public Health and the Department of Mental Hygiene on a scientific basis and report back to the Council and the House of Delegates with suggestions for a pilot program on the medical aspects of narcotics addiction.

7. *Coroners' Cases:*

Doctor Todd presented the possibility of assuring that coroners take and retain tissues as a permanent file in cases requiring autopsy. On motion duly made and seconded, it was voted to request the Committee on Legislation to study the advisability of sponsoring legislation to make it permissible for coroners to take and retain tissues in a permanent file in cases coming under their jurisdiction.

8. *State Department of Public Health:*

Doctor Malcolm Merrill, State Director of Public Health, discussed the proceedings of meetings recently held by the American Public Health Association and the Association of State and Territorial Health Officers.

Doctor Merrill also reported that the subcommittee of the Medical Advisory Committee to the Crippled Children's Services had under consideration the question of various disease entities which might be made a part of the overall program and had under consideration a large field of diseases which were potential additions.

On motion duly made and seconded, it was voted that epilepsy is not now considered an appropriate condition to be added to the Crippled Children's program until a study can be made to determine the relative importance of a number of diseases for inclusion or exclusion under this program.

9. *Public Relations:*

Ed Clancy, director of public relations, presented some advertisements prepared by the A.M.A. on the subject of the right to choose a personal physician. He reported that these proposed advertisements will be presented to the county societies and he requested the Councilors to lend their support to programs in the county societies to run this copy in their local newspapers.

10. *Committee on Postgraduate Activities:*

Doctor Edward C. Rosenow, Jr., chairman of the Committee on Postgraduate Activities, reported that the committee had voted to discontinue its West Coast circuit and to omit Napa as one of the meeting cities on the northern circuit. On motion duly made and seconded, authority was voted to make these changes.

Doctor Rosenow also discussed requests received to stage commercial exhibits at postgraduate institutes and it was regularly moved, seconded and voted that county medical societies or auxiliaries might put on such exhibits if the county society where the institute was planned gave approval.

11. *Commission on Professional Welfare:*

Councilor Kirchner, chairman of the Commission on Professional Welfare, reported that the committee on insurance had drawn up specifications for a suggested group major hospitalization insurance contract and would seek bids from underwriters.

12. *Legal Department:*

Mr. Hassard reported on a series of suits brought against a pharmaceutical manufacturer following the death or crippling of a number of individuals following use of the company's product. The jury had found the company not liable for negligence but, under instructions from the trial judge, liable for damages because of a breach of implied warranty of its product. This is the first court decision holding for such liability. On motion duly made and seconded, it was voted to authorize legal counsel to file an *amicus curiae* brief in behalf of the company on the basis of the effects of such ruling on the practice of medicine, in the event other organizations do not so act.

On motion duly made and seconded, approval was voted for a proposed letter to the State Bar of California, expressing opposition to legislation which might be introduced to authorize the use of textbooks in lieu of expert testimony in medical and other professional liability cases.

13. *California Physicians' Service:*

Vice-Speaker Heron, as a member of the Board of Trustees of California Physicians' Service, reported that the administrative streamlining of C.P.S. was going smoothly and that substantial annual savings were anticipated. He also reported that California Physicians' Insurance Corp. would enter a bid on the group major hospitalization insurance plan discussed earlier in the meeting.

14. *Medical Executives Conference:*

Mr. Hunton reported that the Medical Executives Conference had met a day earlier and that minutes of the meeting would be sent to all members of the Council.

15. *Report of the President:*

President West reported that the Committee for Emergency Action had met and approved a program to secure additional returns from members on the Relative Value Study reevaluation which is now under way.

16. *Report of the President-Elect:*

President-Elect Reynolds reported on some recent visits to county societies and stated that at one meeting he had offered the major alternatives facing the profession in consideration of proposed legislation to provide additional hospital and medical services for the older segment of the population. It was agreed that this subject be pursued further at the meeting of county society officers planned for January 10, 1959, in Los Angeles.

17. *Section on Radiology:*

Suggestions made by the Section on Radiology for implementing the proposals made in Resolution No. 71 of the 1958 House of Delegates were presented and, on motion duly made and seconded, referred to the Commission on Medical Services for study and report.

18. *Constitution Study Committee:*

A report of the Constitution Study Committee, to which had been referred the first three items of Resolution No. 23 of the 1958 House of Delegates, was presented and approved. The report suggested that as a means of improved communications all material to go before meetings of the Council be sent in advance to the officers of the county societies and had asked that further study be given to the matter of representation of societies and their members in the C.M.A.

Councilor Davis proposed a new format for the Council agenda, which is to be submitted for consideration.

19. *Committee on Nominations:*

It was agreed that the Committee on Nominations should look into nominations to be made to the State Department of Public Health for physician members of regional advisory boards on the problem of rabies.

Chairman Bostick of the committee suggested the possibility of adding to some committees the names of additional ex-officio members, including laymen where so indicated.

20. *Homes for the Aged:*

A resolution adopted by the Council of the Los Angeles County Medical Association, requesting further study of the problems of homes for aged people was considered and, on motion duly made and seconded, voted referred to the Committee on Problems of the Aged.

21. *Attendance at Council Meetings:*

On motion by Councilor Sherman, duly seconded, it was voted to invite various specialty groups, including the California Academy of General Practice, to send observers, at their own expense, to Council meetings.

22. *"Challenge to Socialism":*

On motion by Councilor Teall, duly seconded, it was voted to subscribe to the above-named service for all members of the Council and all county medical societies.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 6:15 p.m.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

* * *

443rd Meeting

The meeting was called to order by Chairman Lum at the Pebble Beach Lodge, Pebble Beach, California, on Saturday, December 13, 1958, at 9:30 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron, Councilors MacLaggan, Wheeler, Todd, Foster, O'Neill, Kirchner, O'Connor, Pearman, Harrington, Davis, Sherman, Lum, Bostick and Teall, and Editor Wilbur.

Absent for cause, Councilor Shaw and Secretary Daniels.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Clancy, Thomas, Whelan, Collins and Dr. Batchelder of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; Messrs. Read and Salisbury of the Public Health League of California; county society executives Scheuber of Alameda-Contra Costa; Jensen of Fresno, Geisert of Kern, Rosenow of Los Angeles, Field of Los Angeles, Bannister of Orange, Marvin of Riverside, Foster of Sacramento, Nute of San Diego, Neick of San Francisco, Wood of San Mateo, Donovan and Colvin of Santa Clara, Grove of Monterey and Dermott of Sonoma; Dr. Larsen and Messrs. Paolini and Lyon of California Physicians' Service; Doctors Englehorn, Clark, Harness, Smith, Simard, Helfrich and others of the Monterey County Medical Society; Doctors Moore and Day of the Kern County Medical Society; Doctor Edward Liston of the Santa Clara County Medical Society; Doctors John Keye, Wayne Pollock, James McPharlin, Rudolph Toller, Thomas Elmendorf, Robert C. Combs, William Kaiser, Wilbur Bailey, Donald Ross, Malcolm Merrill, Dan O. Kilroy, Malcolm S. M. Watts and others.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 442nd meeting of the Council, held November 8, 1958, were approved.

2. *Membership:*

(a) A report of membership as of December 11, 1958, was presented and ordered filed.

(b) On motion duly made and seconded, 13 members whose delinquent dues had been received were voted reinstatement.

(c) On motion duly made and seconded, Doctors Audrey Woodrow Talley of San Francisco and Ruth Standard of Sonoma were elected to Associate Membership.

(d) On motion duly made and seconded in each instance, three applicants were elected to Retired Membership. These were: Hugo H. Schmitt, Santa Clara County, and Hans Lisser and Hans A. Meyer, San Francisco County.

(e) On motion duly made and seconded, two members were voted reductions of dues because of illness.

3. *Financial:*

A report of bank balances and investments as of December 11, 1958, was presented and ordered filed.

4. *Commission on Medical Services:*

Doctor Francis J. Cox, chairman of the Commission on Medical Services, reported on a variety of items for the commission. These included the following:

(a) Resolutions No. 21 and No. 15 of the 1957 House of Delegates, relative to hospital accreditation. This matter was considered jointly with another report—see Item 13.

(b) Resolution No. 71 of the 1958 House of Delegates, relative to the practice of radiology in hospitals. On motion duly made and seconded, it was voted to send copies of the resolution, together with a covering letter, to the chiefs of staffs and hospital radiologists, together with radiologists in private practice, of all hospitals in California.

(c) Resolution No. 46, 1958 House of Delegates, relative to third parties. It was agreed to give further study to this matter.

(d) Resolution No. 6, 1958 House of Delegates, relative to the industrial accident fee schedule. To be restudied in the light of the current relative value study.

(e) Resolution No. 62, relative to uniform claims forms. Report deferred pending results of a study under way by a subcommittee.

(f) Resolution No. 14, combined with others, relative to annual resurveys of fee levels. It was agreed that annual studies be made but that they may be on the basis of samplings and not complete reviews.

(g) Resolution No. 60, relative to pooled claims departments and a central clearing house for insurance carriers, it was agreed that action along this line is premature in view of pilot programs in county societies which include claims processing as an integral part of the plan.

(h) Definition of "indigent." Re-referred to Commission for further study.

(i) Uniform claims forms. The Commission reported that it was considering the development of a single claims form to be used for all accident and health insurance cases, in place of the two forms now in use. In so doing, it is following the principles developed in San Diego County which provide, basically, that where reporting is performed by the physician without charge, the physician has the right to determine the type and degree of the service, that wherever the insurance company or agency wishes additional information an appropriate fee shall be charged, and that a first report form be developed and made available to physicians.

(j) The Commission reported that it is establishing a subcommittee on foundations as a central point for information on this subject.

(k) The Commission suggested the possible revision of the Constitution of the Association so as to include the understanding and implementation of socio-economic conditions as one of the purposes of the Association. This was re-referred to the commission for further study and consultation with legal counsel.

(l) The Commission presented a series of principles which it proposed for adoption as guides in the provision of medical services under current conditions where insurance and similar protection is available to patients. These principles were re-referred to the Commission for further study and report.

On motion duly made and seconded, it was voted to refer to the Commission on Medical Services the problem of a study to recommend to the county medical societies an appropriate method of establishing the usual fees in the local area.

(m) Medicare. It was reported that the Department of the Army has requested that the present Medicare contract which will expire in February, 1959, be extended for 12 months. On motion duly made and seconded, it was voted to accede to this request, with the proviso that the words "as appropriate" be deleted from the contract section which provides that the Association negotiate for the fees to be paid physicians under the contract.

5. *Committee on Other Professions:*

Doctor Wayne Pollock, chairman of the Committee on Other Professions, reported that representation was advisable on a committee established to review the progress of accelerated nurse training

programs. On motion duly made and seconded, it was voted to name such representatives.

6. *Appointment of Executive Director:*

Doctor Sherman reported that the Council had adopted a resolution calling for the appointment of an Executive Director and that Mr. Howard Hassard had been appointed to that position, effective January 1, 1959. The Council's resolution follows:

Resolved That:

1. Effective January 1, 1959, the position of Executive Director is established.

2. He shall be chief executive officer of the Association and generally supervise and direct all administrative activities of the Association.

3. He shall have complete charge of all employees.

4. He shall be directly responsible to the Council.

and Resolved That:

a. Howard Hassard is selected Executive Director, on a part-time basis.

b. Compensation for his services and fringe benefits to be as agreed between the Chairman of the Council and Finance Committee and the firm of Peart, Baraty & Hassard.

7. *Committee on Mental Health:*

Doctor Rudolph Toller discussed the proposal of the Committee on Mental Health that legislation be sought to provide a modern and useable definition of legal insanity in criminal cases. On motion duly made and seconded, it was voted to refer this proposal to the Committee on Legislation for study and further report.

Doctor Toller also discussed the question of privilege as applied to psychiatrists' records. On motion duly made and seconded, it was voted to request the Commission on Professional Welfare, which has the broad question of privilege under study, to have a member of the Committee on Mental Health sit with it on this study.

8. *Public Welfare Assistance Law:*

Doctor Harrington reported that the Liaison Committee to the State Department of Social Welfare had met with the State Board of Social Welfare and that the proposal had been made there for legislation which would debar from participation in the public welfare medical assistance program any individuals who had been shown to have abused the terms of the program. Doctor Harrington's committee expressed its belief that such legislation was improper and that the situation should be handled administratively. On motion duly made and seconded, it was voted to uphold the committee's position.

Doctor Harrington also reported that a proposal had been made that disabled persons be permitted to participate in the public welfare medical care program upon their depositing $6 a month in the fund. He also reported that costs were being cut by eliminating the prescription of ataractics and steroids and that injectibles might later be eliminated.

Mr. Hassard presented several proposed amendments to the welfare laws which would clarify the medical care program. On motion duly made and seconded, it was voted to refer these proposals to the Committee on Legislation for action.

9. *Committee on Legislation:*

Doctor Dan O. Kilroy, chairman of the Committee on Legislation, reported that a meeting had been held with representatives of the Board of Medical Examiners and that the board's legislative program appeared to be in keeping with sound standards.

He also reported renewed interest in the subject of temporary permits for graduates of foreign medical schools to serve as interns and residents in California hospitals. On motion duly made and seconded, it was voted to refer this matter to the Committee for Emergency Action.

Mr. Ben Read reported that under a state proposition passed at the November election, the 30-day legislative recess which has been held in previous sessions has been done away with. Instead, the law now provides that the Legislature shall meet for not more than 168 days, starting January 5 and ending June 19, 1959, and that bills may be introduced at any time during this period.

10. *Public Relations:*

Mr. Ed Clancy reported that all House of Delegates resolutions referred to the Committee on Public Relations had been implemented. He also reported that a program of tetanus immunization was under way in Orange County through tetanus toxoid injections and that such programs may be instituted in other areas.

11. *Committee on Insurance:*

Doctor Homer Pheasant, chairman of the Committee on Insurance, reported that 52 insurance companies had been invited to bid on the specifications for group major hospitalization insurance developed by the committee's consultant. Of these, 11 companies have indicated an interest to date and several have suggested variations from the specifications originally sent out. On advice of the consultant, the committee suggested that further study be given to the matter, with a report to be made in February. The Council approved this suggestion.

12. *Legal Department:*

Mr. Hassard reported that on a court case where he had been authorized to enter an *amicus curiae* brief in behalf of the defendant, another organization has authorized such a filing, in opposition to the doctrine of implied warranty.

13. *Committee for Emergency Action:*

Doctor West reported that the Committee for Emergency Action had met with a similar committee from the California Hospital Association and with representatives of the State Department of Public Health in regard to problems of hospital operations and medical management and that further meetings of this type were planned.

On motion duly made and seconded, it was voted to refer to the appropriate committee, to be selected by the Committee on Committees, the problem of preparing the medical aspects to be used in hospital standardization.

14. *1959 Annual Session:*

Doctor Doyle requested and was granted authority to invite to the February 22, 1959, meeting the presidents of the California Hospital Association, California State Nurses Association, California State Dental Association, Southern California State Dental Association, California Veterinary Medical Association and California Pharmaceutical Association. These officials would be invited to attend the meeting of the House of Delegates and be introduced to that body.

15. *State Department of Public Health:*

Doctor Malcolm Merrill, State Director of Public Health. reported that a human death from rabies had been recorded in California, resulting from the bite of a bat.

Doctor Merrill also displayed a chart showing the low incidence of poliomyelitis in California during the past year; he reported that polio outbreaks had occurred in three other locations and warned that California was not immune from such an outbreak. He also gave figures on the comparatively low percentage of people in this state who had received a full series of polio shots.

16. *Commission on Medical Education:*

Mr. Thomas reported the recommendation of the Committee on Maternal and Child Care that investigators in the study of perinatal mortality be individuals with adequate experience to investigate cases of maternal and perinatal mortality and need not be certified specialists in this field. The Council agreed with this recommendation.

17. *Committee on Committee Nominations:*

Doctor Bostick, chairman of the Committee on Committee Nominations. reported that his committee had under consideration the possibility of requesting the Council for authority to pay a nominal per diem to committee members who might be called from their offices on short notice in order to attend to Association business. A further report will be made on this proposal.

18. *Committee on Advertising:*

A request from the Committee on Advertising for a statement of policy in regard to the acceptability of financial advertising was discussed and, on motion duly made and seconded, it was voted to reaffirm a statement adopted in 1948, to the effect that the pages of CALIFORNIA MEDICINE should be open to financial advertising of an institutional nature but not for the advertising of specific security offerings.

19. *Governor's Traffic Safety Conference:*

A report from Doctor Chester Barta on the Governor's Traffic Safety Conference, which he attended as an Association representative, was received and ordered forwarded to the Committee on Industrial Health for study and consideration.

20. *Other Associations:*

On motion duly made and seconded, it was voted to extend to Boyd Thompson, executive secretary of the San Joaquin County Medical Society, the thanks of the Association for his attendance at and diligent reporting on meetings of the Conference of Health and Welfare Plan Trustees and to thank his county society for making his services available.

21. *California Physicians' Service:*

Doctor Heron reported that California Physicians' Service has now covered more than 7,000 people under the $7,200 income ceiling contract in Los Angeles and other counties. He also reported that California Physicians' Insurance Corp. was studying a contract for persons above the age of 65 and also the possibility of providing deductible contracts based on units of service rather than number of visits.

22. *National Foundation:*

Discussion was held on the request of the National Foundation for appointment of an individual to serve on a board to select candidates for fellowships. It was agreed that Doctor Bostick should bring in nominees for this appointment.

23. *Commissions and Committees:*

Doctor Bostick reported that his committee is recommending that By-Law amendments be prepared to place the Committee on Adoptions under the Commission on Community Health Services, the Committee on Private Practice of Medicine under the Commission on Professional Welfare, and the Committee on Scientific Work under the Commission on Medical Education. The Council agreed to these proposals.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:35 p.m.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

In Memoriam

Barrow, John Vincent. Died in Beverly Hills, December 17, 1958, aged 81. Graduate of Rush Medical College, Chicago, Illinois, 1911. Licensed in California in 1911. Doctor Barrow was a life member of the Los Angeles County Medical Association.

✣

Bishop, Harry Arthur. Died in Bakersfield, September 24, 1958, aged 48, of multiple pulmonary and brain abscesses. Graduate of Northwestern University Medical School, Chicago, Illinois, 1936. Licensed in California in 1937. Doctor Bishop was a member of the Kern County Medical Society.

✣

Conklin, James E. Died November 27, 1958, aged 48. Graduate of the University of Southern California School of Medicine, Los Angeles, 1939. Licensed in California in 1939. Doctor Conklin was a member of the Sacramento Society for Medical Improvement.

✣

Cox, J. Emit. Died December 28, 1958, aged 93. Graduate of Northwestern University Medical School, Chicago, Illinois, 1895. Licensed in California in 1898. Doctor Cox was a life member of the Fresno County Medical Society.

✣

Crowe, John Alexander. Died December 20, 1958, aged 54. Graduate of the Creighton University School of Medicine, Omaha, Nebraska, 1931. Licensed in California in 1931. Doctor Crowe was a member of the San Francisco Medical Society.

✣

Fagin, Joseph. Died December 19, 1958, aged 55. Graduate of the State University of New York College of Medicine at New York City, Brooklyn, New York, 1938. Licensed in California in 1947. Doctor Fagin was a member of the Los Angeles County Medical Association.

✣

Hubbard, Milton E. Died in San Francisco, December 24, 1958, aged 66, of heart disease. Graduate of University of Illinois College of Medicine, Chicago, Illinois, 1928. Licensed in California in 1929. Doctor Hubbard was a member of the Los Angeles County Medical Association.

✣

Huggins, Benjamin H. Died in Santa Barbara, December 20, 1958, aged 70. Graduate of The Hahnemann Medical College and Hospital, Chicago, Illinois, 1916. Licensed in California in 1916. Doctor Huggins was a member of the Santa Barbara County Medical Society.

✣

Myers, Thomas. Died in Lynwood, December 19, 1958, aged 67, of leukemia. Graduate of University of Minnesota Medical School, Minneapolis, Minnesota, 1914. Licensed in California in 1941. Doctor Myers was a member of the Los Angeles County Medical Association.

✣

O'Donnell, Reynolds J. Died in Santa Monica, December 11, 1958, aged 57, of a cerebral hemorrhage. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1929. Licensed in California in 1944. Doctor O'Donnell was a member of the Los Angeles County Medical Association.

✣

Osheroff, Samuel A. Died December 26, 1958, aged 70. Graduate of University of Nebraska College of Medicine, Omaha, Nebraska, 1919. Licensed in California in 1948. Doctor Osheroff was a member of the San Diego County Medical Society.

✣

Stern, Robert Leo. Died in Beverly Hills, December 17, 1958, aged 50, of heart disease. Graduate of Rush Medical College, Chicago, Illinois, 1934. Licensed in California in 1934. Doctor Stern was a member of the Los Angeles County Medical Association.

✣

Stoughton, Arthur Volney. Died in Claremont, December 26, 1958, aged 86. Graduate of Ohio Medical University, Columbus, Ohio, 1898. Licensed in California in 1911. Doctor Stoughton was a member of the Los Angeles County Medical Association.

✣

Watkins, Leon Harlan. Died October 9, 1958, aged 75, of uremia and nephritis. Graduate of Johns Hopkins University School of Medicine, Baltimore, Maryland, 1909. Licensed in California in 1920. Doctor Watkins was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

Wayland, Clyde. Died in San Jose, December 27, 1958, aged 75, of a circulatory ailment. Graduate of The Hahnemann Medical College and Hospital of Philadelphia, Pennsylvania, 1909. Licensed in California in 1910. Doctor Wayland was a retired member of the Santa Clara County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

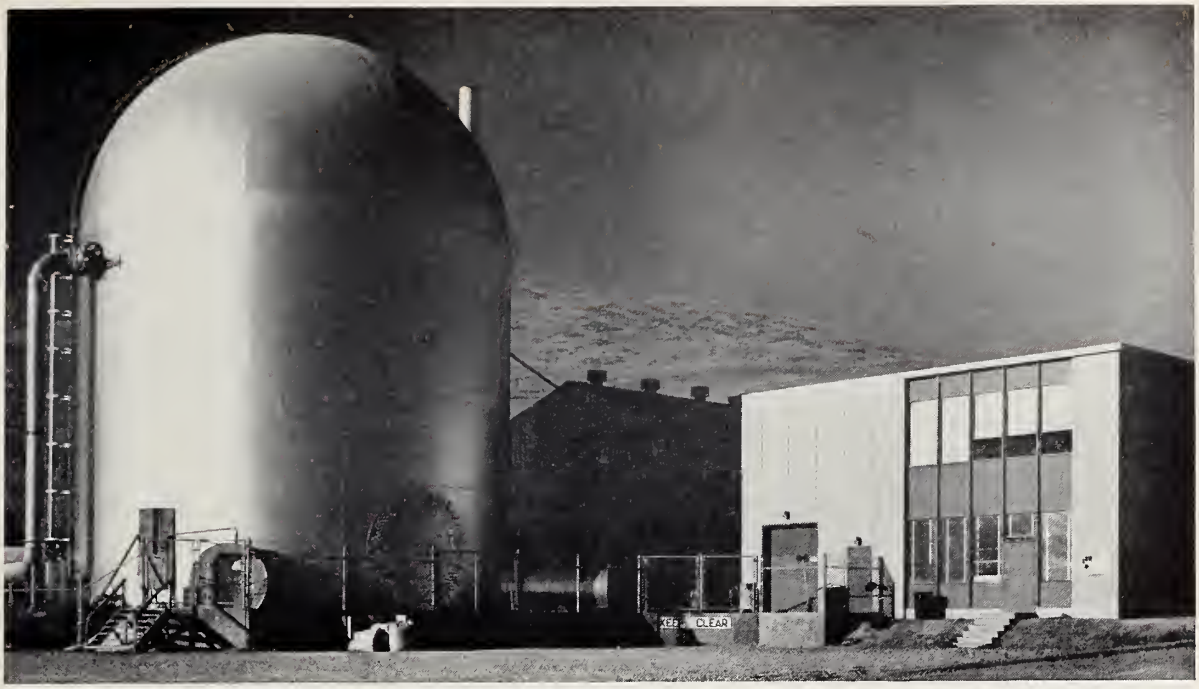
✣

Weller, Theodore Warford. Died December 10, 1958, aged 64, of Hodgkin's disease. Graduate of Harvard Medical School, Boston, Massachusetts, 1924. Licensed in California in 1928. Doctor Weller was a member of the Alameda-Contra Costa County Medical Association.

1959 Annual Session

SAN FRANCISCO • FEBRUARY 22-25

- General Scientific Meetings • Postgraduate Courses
 Technical Exhibits • Scientific Exhibits
- Medical Motion Pictures
- President's Dinner Dance
 Tuesday, February 24 • Rose-Concert Room, Sheraton-Palace Hotel
- House of Delegates
 Sunday, February 22 • Wednesday, February 25
- Registration Daily
 8:30 a.m. to 5:30 p.m. . . . No Registration Fee



1959 ANNUAL SESSION HIGHLIGHT

VALLECITOS ATOMIC LABORATORY TOUR

Tuesday, February 24, 1959

The second general meeting of the CMA 1959 Annual Session will be given over to a fascinating tour through the nation's largest privately financed atomic research facility. You will see General Electric Company's Vallecitos Boiling Water Reactor doing constructive, peace-time work. The reactor is being used with the Pacific Gas and Electric Company to generate electrical energy—for sale. Here is an opportunity to become better acquainted with one of the marvels of our time. A lecturer will explain what you see as the tour progresses, and will answer your questions. Luncheon at the Old Hearst Ranch and bus fare are included in the price of the tour.

LUNCHEON SPEAKERS:

Mr. NORMAN R. SUTHERLAND, *President, Pacific Gas and Electric Company*
Dr. RALPH D. BENNETT, *Manager, Vallecitos Atomic Laboratory*

Tickets on sale ($5 each) at the Registration Desk

5 POSTGRADUATE COURSES

during

C.M.A. ANNUAL SESSION

February 21 to 24, 1959 • San Francisco

California Medical Association in cooperation with the Medical Schools of STANFORD UNIVERSITY and UNIVERSITY OF CALIFORNIA, *San Francisco, will present five Postgraduate Courses during the Annual Session in February. These Courses, to be held in the Medical Schools, will be clinically oriented and will include case presentations.*

You are invited to select the subject in which you are most interested, follow that Course, and make the 1959 Session the "Postgraduate Session with a Purpose"—time and money well spent.

• By STANFORD UNIVERSITY SCHOOL OF MEDICINE

1. TREATMENT OF HERNIA—9 hours. Sponsored by the CMA Sections on General Practice and Surgery.

 Time: Sunday, Monday, Tuesday, February 22, 23, 24, 1959—9:00 a.m. to 12:00 noon.

 Place: Stanford University Hospital.

 Fee: $25.00.

2. NEUROLOGY FOR PHYSICIANS—12 hours. Sponsored by C.M.A. Sections on General Practice and Neurology.

 Time: Saturday and Sunday, February 21, 22, 1959—9:00 a.m. to 12:00 noon and 1:00 to 4:00 p.m.

 Place: Stanford University Hospital.

 Fee: $35.00.

3. OPHTHALMOLOGY—4 hours. Sponsored by C.M.A. Section on Ophthalmology.

 Time: Saturday, February 21, 1959—9:00 a.m. to 1:00 p.m.

 Place: Stanford University Hospital.

 Fee: $10.00.

• By UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE

1. FAMILY ENDOCRINOLOGY—9½ hours. Sponsored by C.M.A. Sections on General Practice, Internal Medicine, Pediatrics and Obstetrics and Gynecology.

 Time: Sunday, February 22, 1959—9:00 to 12:30 p.m. and 2:00 to 5:00 p.m.
 Monday, February 23, 1959—9:00 to 12:00 noon.

 Place: University of California Medical Center.

 Fee: $25.00.

2. MEDICINE IN THE JET AND SPACE AGE—7 hours.

 Time: Sunday, February 22, 1959—9:00 a.m. to 12:30 p.m. and 1:30 to 5:00 p.m.

 Place: University of California Medical Center.

 Fee: $15.00.

REGISTRATION

Sheraton-Palace Hotel:
Friday, February 20, 6 p.m. to 10 p.m.
Saturday, February 21, 8 a.m. to 9 p.m.
Sunday, February 22, 8 a.m. to 5 p.m.
Monday, February 23, 8 a.m. to noon.

Civic Auditorium:
Sunday, February 22, 8:30 a.m. to 5:30 p.m.
Monday, February 23, 8:30 a.m. to noon.

Color Television Program

REPAIR OF HERNIA

Tuesday, February 24, Polk Hall, Civic Auditorium

Chairman: ROY B. COHN, M.D., Associate Professor of Surgery
Stanford University School of Medicine, San Francisco

A surgical clinic demonstrating operative repair of hernia will be telecast in color from an operating room at San Francisco General Hospital to a wide screen in Polk Hall. Alternative techniques will be discussed by a panel of surgeons, and questions from the Polk Hall audience will be relayed to panel discussants and to the operating room.

The clinical program was arranged by the surgical services of the Stanford University School of Medicine and the University of California School of Medicine at San Francisco General Hospital.

Television arrangements were made by Ciba Pharmaceutical Products, Inc., and television production is under the supervision of Professional Closed Circuit Television Division of Teletalent, Inc.

NINTH ANNUAL
REGIONAL POSTGRADUATE INSTITUTE
SAN JOAQUIN VALLEY COUNTIES

Presented by Committee on Postgraduate Activities of the California Medical Association, in cooperation with Fresno, Madera, Kings, Tulare, Kern, Merced-Mariposa, Inyo-Mono and Stanislaus County Medical Societies and the College of Medical Evangelists, Harold M. Walton, M.D., Chairman of Graduate and Postgraduate Medicine.

Hotel Californian, Fresno

March 19 and 20, 1959

PROGRAM

THURSDAY, MARCH 19, 1959

9:00-10:00 a.m.—**"Rectal Reconnaissance"**—Malcolm R. Hill, Sr., M.D.

10:00-11:00 a.m.—**Use and Abuse of Anticoagulants**—William Paul Thompson, M.D.

11:15-12:30 p.m.—**Two Panel Discussions** (you may go to one of your choice):

Panel I: **Ano-Rectal Disease**

Panel II: **Arthritis—Diagnosis and Current Treatment**

12:30-2:00 p.m.—Luncheon—**Question and Answer Seminar on Morning Session**

2:00-3:00 p.m.—**Peptic Ulcer—Diagnosis and Management**—Charles J. Miller, M.D.

3:00-4:00 p.m.—**"Sherlock Holmes in the Examining Room"**—A. Warren Olson, M.D.

4:15-5:30 p.m.—**Two Panel Discussions** (you may go to one of your choice):

Panel I: **Chemotherapeutic Agents in Treatment of Malignant Disease**

Panel II: **Controversial Indications for Hysterectomy**

5:30-6:30 p.m.—No Host Cocktail Hour

FRIDAY, MARCH 20, 1959

9:00-10:00 a.m.—**Jaundice in the Newborn**—Robert F. Chinnock, M.D.

10:00-11:00 a.m.—**Pediatric Urology**—Roger W. Barnes, M.D.

11:15-12:30 p.m.—**Two Panel Discussions** (you may go to one of your choice):

Panel I: **Office Problems in Pediatrics**

Panel II: **Diabetes—Newer Drugs—Clinical Use**

12:30-2:00 p.m.—Luncheon—**Question and Answer Seminar on Morning Session**

2:00-3:00 p.m.—**Cor Pulmonale**—Edward C. Rosenow, Jr., M.D.

3:00-4:00 p.m.—**Problems in Treatment of Common Skin Disorders**—Molleurus Couperus, M.D.

4:15-5:30 p.m.—Panel: **Pitfalls in Interpretation of Laboratory Tests**

HOST: Fresno County Medical Society . . . **REGIONAL CHAIRMAN:** Owen K. Steinboch, M.D., 3004 North Fresno Street, Fresno 3, Colifornio . . . **Institute Fee:** $25.00. For additional information, contact Postgraduate Activities office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5. **All California Medical Association members and their families are cordially invited to attend.**

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

A GRANT OF $160,000 for research into the basic causes of child accidents has been awarded the State Health Department by the National Institutes of Health.

Accidents in California now kill 1,100 children under the age of 15 each year, hospitalize 25,000 and send another 600,000 for medical care. The hospitalization and medical care in such cases cause loss of some 2,000,000 school days annually.

Recognizing that prevention of such injuries depended upon knowing why certain children were injured while others were not, and that only sketchy information was available on causes, the department began about five years ago to give scientific study to injuries. The State Health Department pioneered in measuring the extent of injuries in the United States through the 1954-55 California Health Survey and through local studies in San Francisco, Santa Barbara, and Alameda and Contra Costa counties.

The department now is pioneering in applying epidemiologic methods to identify the causes of specific types of childhood accidents, such as poisoning, burns and auto-pedestrian trauma.

The grant gives further support to a nationally recognized epidemiology laboratory for study of childhood injuries which was established in 1956 by the Alameda-Contra Costa County Medical Association, the California Department of Public Health, 23 hospitals in the two counties, the University of California School of Public Health, the Alameda and Contra Costa county health departments, and the Berkeley city health department.

The laboratory currently analyzes reports on about 30,000 injuries a year which occur among children under the age of 15 in the two counties.

* * *

St. Vincent's Hospital in Los Angeles has been approved by the department's Crippled Children Services as a place to perform open heart operations using the artificial heart-lung machine. It is the third facility in California approved by the program for the performance of such operations.

The hospital also was approved as a new center for the diagnosis and treatment of congenital heart disease, bringing to 11 the number of approved centers.

Encouraging progress by California medical scientists studying the pathologic effects of air pollution was reported at the Second Air Pollution Medical Research Conference sponsored by the State Health Department.

Previous studies by the department and its associated investigators had failed to demonstrate an immediate effect of air pollution on death or sickness rates. At the conference it was reported that the death rate from pulmonary emphysema has increased 400 per cent in California in the last seven years.

Pulmonary function of Los Angeles patients with the disease was shown to improve substantially if during smoggy weather the persons are kept in a room whose air supply is filtered through activated charcoal to remove the smog.

* * *

A year-end look at activities of the department's new Division of Alcoholic Rehabilitation showed that more than 3,700 patients were admitted to treatment and a total average caseload of 1,500 was maintained in the seven community alcoholism clinics whose operating costs are reimbursed in full or in part by the state.

Outpatient clinics are located in San Francisco, Oakland, Sacramento, San Jose, Stockton, Los Angeles and San Diego. More alcoholic patients were treated in California last year than in any other state, according to preliminary national estimates. California has an estimated 600,000 alcoholics and the highest estimated rate of alcoholism in the nation.

Treatment consists of medical and psychological diagnosis, medication, individual and group psychotherapy, family counseling, cooperation with Alcoholics Anonymous, or a combination of methods. Sources of clinical referrals were: Self, relative or friend, 37 per cent; law enforcement agencies, 29 per cent; welfare and medical agencies, 22 per cent; Alcoholics Anonymous, 7 per cent; other, 5 per cent.

General hospital treatment of acute alcoholism was demonstrated successfully by the division in 1958, with the completion of projects at Mt. Zion Hospital, San Francisco, and the California Hospital, Los Angeles. The demonstrations were supported with state funds to show that acute alcoholics could

be treated in the general hospital medical wards of private hospitals without use of locked rooms, special nurses or other unusual measures.

Mt. Zion Hospital subsequently changed its admission policy on intoxicated patients, reporting that no difficulties are encountered if the hospital staff is trained to understand alcoholism and the patients are screened to eliminate psychotic cases.

* * *

There is an urgent and continuing need for long term studies to learn more about the causes of alcoholism, according to scientists who met recently with the staff of the Division of Alcoholic Rehabilitation.

These studies into the cause of alcoholism, researchers believe, should be carried out over a five to ten-year period to determine, for example, what scientifically verifiable signs can be identified for diagnosing the incipient alcoholic.

The complexity and extent of the problem makes it desirable to carry on applied studies to find out more about how public and private organizations can be more effective in assisting in the control and prevention of alcoholism. Related to this is the need for pinning down specifically the social factors which may promote alcoholism or create susceptibility to it.

Other areas in need of investigation are: Metabolic studies to determine precisely what the effects of alcohol are in its process of oxidation by the body; evaluation studies of the use of various drugs, particularly stimulants and tranquilizers, during acute intoxication, in withdrawal stages and in continued periods of abstinence.

Specialties represented at the meeting included internal medicine, psychiatry, sociology, psychology, neurology, pharmacology and public health.

* * *

A five-year grant of $383,000 from the National Institutes of Health has been awarded the State Health Department for the establishment of an Epidemiology Training Center.

The Center, the first established by a state health department, will provide opportunities for graduate physicians, biostatisticians, public health nurses, veterinarians and social scientists to learn through practical experience in the field and in the laboratory.

Training Center facilities will give opportunity for practical research as well as experience in the development of epidemiologic concepts in relation to newer areas of public health interest such as prevention of accidents and control of alcoholism.

The trainees will participate in department activities and studies, such as the tumor registry, field study of epidemics, cooperative studies of disease outbreaks in hospitals and surveillance of central nervous system diseases.

They also will have opportunity to observe the use of epidemiological methods in studies on the etiologic factors in cancer, prevention of blindness, accidental poisonings, evaluation of the treatment of alcoholism, coronary heart disease and acute respiratory disease of virus origin.





WOMAN'S AUXILIARY

TO THE CALIFORNIA MEDICAL ASSOCIATION

As our 1958-59 Annual Convention is upon us, months before the close of the business year for the county society auxiliaries, we have no conclusive reports to record at this time. However, from all indications (we observed as we visited the county meetings throughout the state) we are assured that our accomplishments will be comparable to those of previous years, and perhaps in many instances they may exceed former achievements.

It was with great encouragement and appreciation that we received the report of the resolution as endorsed by the Council of the California Medical Association, urging all county medical societies to help us form county-wide auxiliaries and also urging all physician members of the Association to encourage their wives' participation in the Auxiliary and in its activities. With this kind of cooperation, we anticipate a substantial increase in membership, especially in "active" membership.

Fundamentally, we are not a social organization. Our objectives are definitely of a serious nature, peculiar to our specific organization, but a well rounded organization, like a well balanced life, needs a variety of activities to create a complete entity.

In an effort to stimulate interest, we have varied our programs to encompass the talents and wishes of the majority of our members and to coincide with the needs in our communities.

Most of our meetings continue to stress our priority projects. Keeping well informed on major issues that concern the medical profession has become a standard obligation. To accomplish the aforementioned well rounded organization, nearly every county auxiliary varies its medical programs with occasional entertainment and educational programs.

The annual benefit parties, usually a beautiful fashion show or a glamorous ball, provide the means for the support of our many philanthropies.

Perhaps it is difficult to think of the objectives that we sponsor in association with glamorous parties, but in addition to being much more fun than fund drives or assessments, they attract greater participation, with the subsequent greater revenue.

Our social as well as our serious activities lend the incentive we need to fulfill our obligations to society and to the improvement of human relations.

As a result of the popularity of the men's panel at our Fall Conference, Mr. Robert Thomas has planned a repeat performance, to take place on Tuesday morning, February 24, in our Auxiliary House of Delegates at the Annual Convention.

The main subject to be discussed is Socio-Economics. Mr. Thomas believes that, in view of the current need of the medical profession to become more acquainted with the socio-economic factors with which the profession will be coping during the next few years, the Auxiliary should be informed on this subject.

A question and answer period will follow the discussion.

We are looking forward to having the panel of experts with us. We will welcome their first hand information on this matter.

The continuous cooperation of the Association and of the C.M.A. personnel provides the Auxiliary with an intelligent understanding of the approach to the solution of these human relations factors. Our public relations and community service programs will be strengthened with the knowledge that we are well informed. We are greatly stimulated with the fact that you appreciate our efforts.

"A little fire is quick trodden out,
Which, being suffer'd, rivers cannot quench."
—SHAKESPEARE

Mrs. Newell Jones
President, Woman's Auxiliary to the California Medical Association

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

The Metropolitan Dermatological Society of Los Angeles elected the following officers for 1959: President, Dr. Eliot Wolk, Sherman Oaks; vice-president, Dr. Max Popper; secretary-treasurer, Dr. Murray C. Zimmerman.

* * *

The Second International Symposium on Myasthenia Gravis will be held in Los Angeles at the Statler Hotel Saturday and Sunday, April 18 and 19. Papers will be presented by leading authorities from Belgium, Canada, England, France, Germany, Russia and the United States.

Information concerning the program in detail may be obtained from Dr. Kermit E. Osserman, 4 East 89th Street, New York 28, New York.

SAN FRANCISCO

The California chapter of the **American College of Chest Physicians** will hold its annual meeting in San Francisco, February 21, the day before the opening of the 88th annual session of the California Medical Association. Registration will begin at 9 a.m. Morning and afternoon scientific sessions will be held in the Rose Room and at noon there will be a luncheon in the Comstock Room.

* * *

The San Francisco Graduate Club of **Phi Delta Epsilon** will hold a dinner-dance at the Mark Hopkins Hotel, Monday, February 23, at 7:00 p.m. Reservations may be made through Dr. Stanley Diamond, 350 Post Street, San Francisco.

* * *

The California Medical Assistants' Association will hold its board of trustees meeting February 21 and 22 at the Sheraton-Palace Hotel immediately before the California Medical Association meeting. It was scheduled at that time in order that the representatives from 35 counties who are to attend will also have opportunity to view the portion of the California Medical Association's motion picture program which has been planned for nurses and medical assistants on Sunday, Monday and Tuesday evenings in the Comstock Room at the Sheraton-Palace Hotel.

The annual meeting of the California Medical Assistants' Association will be held April 18 and 19 in Pasadena.

* * *

The American College of Allergists will hold a graduate instructional course in allergy at the Mark Hopkins Hotel, San Francisco, March 15, 16 and 17 and then its 15th annual meeting on March 18, 19 and 20.

SAN JOAQUIN

Dr. James R. Powell of Stockton became president of the San Joaquin County Medical Society and Dr. Clarence A. Luckey, also of Stockton, was named president-elect to succeed to the presidency next year.

SAN MATEO

Dr. William H. Thompson of Burlingame was installed as president of the San Mateo County Medical Society at the annual meeting in December, and Dr. Robert O. Holmes of San Mateo, formerly secretary, was elected president-elect. Dr. Frank J. Novak of Menlo Park succeeded Dr. Holmes as secretary.

SONOMA

Dr. Lucius Button was installed as president of the Sonoma County Medical Society at the organization's meeting in December, and Dr. Cedric C. Johnson was named president-elect. Reelected secretary-treasurer was Dr. Clayton B. Taylor.

GENERAL

The 14th **National Conference on Rural Health** will be held at Wichita, Kansas, March 5 to 7. The conference is promoted by the Council on Rural Health of the American Medical Association, state medical associations and farm and educational organizations.

The program will stress mental health, problems of aging, nutrition, dental health, the costs of medical care and various aspects of health insurance.

* * *

The American College of Gastroenterology has announced the establishment of an **award contest** for the best unpublished paper on research in gastroenterology or an allied field. This award is to be known as the Henry G. Rudner, Sr., Award, honoring Dr. Henry G. Rudner, Sr., of Memphis, chairman of the research committee of the American College of Gastroenterology and former chairman of the board of governors of the organization. The prize will be $750 plus $250 for traveling expenses to present the paper at the 24th annual convention of the college, which is to be held in Los Angeles in September.

The contest will be open to anyone with the degree of Doctor of Medicine from a recognized medical school or university. Deadline for receipt of manuscripts is June 1. Particulars may be obtained from the College at 33 West 60th Street, New York 23.

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The Eighth Congress of the **Pan-Pacific Surgical Association** will be held in Honolulu, Hawaii, September 28 through October 5 in 1960.

All members of the profession are cordially invited to attend and are urged to make arrangements as soon as possible if they wish to be assured of adequate facilities. Further information and brochures may be obtained by writing to Dr. F. J. Pinkerton, Director General of the association, Suite 230, Alexander Young Building, Honolulu 13.

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The Division of Obstetrics and Gynecology of the International College of Surgeons announced its second annual competition for two **awards for the best manuscripts** on a phase of obstetrics and gynecology. The first award will be $500 and the second $300.

The contest is limited to interns, residents, or graduate students in obstetrics and gynecology, or to those engaged in the practice or teaching of the specialty. The deadline for entries is June 1. Particulars may be obtained from Dr. Harvey A. Gollin, secretary of the prize committee, 55 East Washington Street, Chicago 2.

POSTGRADUATE

EDUCATION NOTICES

THIS BULLETIN of the dotes of postgroduote education programs ond the meetings of vorious medicol orgonizotions in Colifornio is supplied by the Committee on Postgroduote Activities of the Colifornio Medicol Associotion. In order thot they moy be listed here, pleose send communicotions reloting to your future medicol or surgicol progroms to: Mrs. Morgoret H. Griffith, Director, Postgroduote Activities, Colifornio Medicol Associotion, 2975 Wilshire Boulevord, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Medical Terminology for Medical Center Personnel. Tuesdays and Thursdays, February 24 through May 28. Twenty-six hours. Fee: $8.00.

Research in Nursing. Tuesdays, March 3 through June 9. Thirty hours. Fee: $25.00.

Medical Mycology for Laboratory Technologists. Wednesdays, March 4 through April 22. Twenty-four hours. Fee: $50.00.

Ear, Nose and Throat. Friday and Saturday, March 13 and 14. Six hours.*

Diagnostic Radiology. Friday and Saturday, March 20 and 21. Twelve hours. Fee: $55.00 (includes lunch).

Management of Sports Injuries. Wednesday and Thursday, March 25 and 26. Six hours. Fee: $10.00.

Steroids. Friday and Saturday, April 3 and 4. Six hours. Fee: $12.50.

Current Developments in Nutrition (Arrowhead). Friday, Saturday and Sunday. April 24, 25 and 26. Ten hours. Fee: $50.00 (includes board and room).

Clinical Laboratory Techniques. Thursday, Friday and Saturday, May 21, 22 and 23. Nine hours.*

Clinical Traineeships—Anesthesia. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Advances in Psychiatric Nursing. Thursday evenings, March 12 through April 30. Sixteen hours. Fee: $15.00.

Diagnostic Radiology. Friday through Tuesday, March 20 through March 24. Thirty-five hours. Fee: $80.00.

Immunization (Children's Hospital). Saturday, March 21. Seven hours.*

Enzymes—Basic and Clinical Aspects. Thursday, Friday and Saturday, April 2, 3 and 4. Twenty-one hours.*

Nursing in Rehabilitation. Monday to Friday, April 27 through May 15. One hundred and five hours. No fee.

Ear-Nose-Throat. Friday and Saturday, May 15 and 16. Fourteen hours. Fee: $40.00.

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Assistant Dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Symposium on Adrenal Steroids. Friday and Saturday, March 27 and 28. Twelve hours.*

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Fluid and Electrolyte Balance. March 20 through 22. Hotel Statler, Los Angeles. In addition to introductory lectures, there will be supervised practice on cases which demonstrate electrolyte and water imbalance. Tuition: $75.00.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14. (As a time and money saver, round trip air travel is also possible July 29 to August 10.)

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Head and Neck (14 periods, 63 hours), April 22 through June 3. Tuition: $75.00.

Surgical Anatomy—Head and Neck (12 periods, 24 hours), April 22 through June 3. Tuition: $35.00.

1959 Alumni Postgraduate Convention. Refresher Courses, March 8 and 9 at 1720 Brooklyn Avenue; Scientific Assembly, March 10, 11 and 12 at Biltmore Hotel. *Contact:* Walter Crawford, executive secretary, 316 North Bailey Street, Los Angeles 33.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

*Fees to be announced.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

ANNUAL SESSION POSTGRADUATE COURSES

BY STANFORD UNIVERSITY SCHOOL OF MEDICINE:

Ophthalmology. 4 hours. Saturday, February 21, 9:00 a.m. to 1:00 p.m. at Stanford University Hospital.

Neurology for Physicians. 12 hours. Saturday and Sunday, February 21 and 22, 9:00 a.m. to 12 noon and 1:00 p.m. to 4:00 p.m. at Stanford University Hospital.

Treatment of Hernia. 9 hours. Sunday, Monday and Tuesday, February 22, 23 and 24, 9:00 a.m. to 12 noon at Stanford University Hospital.

BY UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE:

Medicine in the Jet and Space Age. 7 hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 1:30 p.m. to 5:00 p.m. at University of California Medical Center.

Family Endocrinology. 9½ hours. Sunday, February 22, 9:00 a.m. to 12:30 p.m. and 2:00 p.m. to 5:00 p.m. Monday, February 23, 9:00 to 12 noon at University of California Medical Center.

POSTGRADUATE INSTITUTES

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel California, Fresno. Chairman: Owen Steinbach, M.D., 3004 Fresno St., Fresno.

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25 and 26, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

POSTGRADUATE CIRCUIT COURSES

Sacramento Valley Circuit for Dunsmuir, Chico, Marysville and Auburn, in cooperation with Stanford University School of Medicine, begins week of March 2.

North Coast Circuit for Eureka, Ukiah and Napa, in cooperation with University of California, San Francisco, School of Medicine. Begins week of March 2.

Contact: One of the chairmen listed above, or Postgraduate Activities Office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

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Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued early this year. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

FEBRUARY MEETINGS

Alameda-Contra Costa Medical Association and the Institute for Metabolic Research Seventh Annual Symposium on Metabolic Problems. All day, February 16 through February 18, 1959. Auditorium, Highland-Alameda County Hospital, Oakland, California. *Contact:* L. W. Kinsell, M.D., director, Institute for Metabolic Research, 2701 14th Avenue, Oakland 6.

American College of Chest Physicians Fourth Annual Postgraduate Course on Diseases of the Chest, February 16 through February 20, 1959. Sir Francis Drake Hotel, San Francisco, California. *Contact:* Executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

Cancer Commission, California Medical Association Cancer Conference for Sacramento Society for Medical Improvement, February 17, Sacramento.*

Bakersfield Surgical Society Meeting, February 19, 8:30 p.m., at Paola's. *Contact:* Chas. P. Marvin, M.D., 2628 G Street, Bakersfield.

California Chapter, American College of Chest Physicians Annual Meeting, February 21, 9 to 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Elmer C. Rigby, M.D., president, 1930 Wilshire Boulevard, Los Angeles 57.

California Medical Association Annual Meeting, February 22 through February 25, 1959, Sheraton-Palace Hotel, San Francisco. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

Cancer Commission, California Medical Association Cancer Conference for Mendocino-Lake Counties Medical Society. February 26, Ukiah.*

MARCH MEETINGS

Fresno, Madera, Kings Counties Chapter, California Academy of General Practice, One day Symposium, March 6, 8 to 5, Hacienda Motel, Fresno. *Contact:* Paul R. Brother, M.D., president, Fresno Chapter, 3227 Mayfair Boulevard, Fresno 3.

American College of Allergists, March 15 through March 20, Fairmont Hotel, San Francisco. *Contact:* M. Coleman Harris, M.D., Secretary, 450 Sutter St., San Francisco 8.

*Contact: Walter E. Batchelder, M.D., Medical Director, C.M.A. Cancer Commission, 450 Sutter Street, San Francisco 8.

Cancer Commission, California Medical Association Cancer Conference for Kern County Medical Society, March 7, Bakersfield.*

Pioneers Memorial Hospital 9th Annual Postgraduate Medical and Surgical Convention. March 20 and 21, program by University of Colorado Medical School. *Contact:* George Jaquith, M.D., Secretary, Route 1, Box 70, Brawley, Calif.

Nevada Division, American Cancer Society First Annual Seminar, March 25 and 26, Riverside Hotel, Reno. *Contact:* Ralph Nelson, executive director, P. O. Box 55, Carson City, Nevada.

San Francisco Heart Association Nurses Institute "Care of the Cardiac Patient," March 25 and 26, 8:30 a.m. to 3:30 p.m., Marina Jr. High School, 3500 Fillmore Street, San Francisco. *Contact:* Jean Sullivan, program director, 259 Geary Street, San Francisco.

American Orthopsychiatric Association 36th Annual Meeting, March 30 through April 1, Sheraton-Palace Hotel, San Francisco. *Contact:* Donald Shaskan, M.D., chairman, Arrangements Committee, Veterans Administration, 49 Fourth St., San Francisco 3.

APRIL MEETINGS

American Group Psychotherapy Association 5th Annual Western Regional Meeting. April 2 and 3, Sheraton-Palace Hotel, San Francisco. 9:00 a.m. to 5:00 p.m. each day. *Contact:* H. S. Morgenstern, M.D., Langley-Porter Clinic, University of California Medical Center, San Francisco 22.

California Tuberculosis and Health Association and California Trudeau Society Annual Meeting, April 2 through 4, Villa Motor Hotel, San Mateo. *Contact:* Mrs. Mary C. French, 130 Hayes Street, San Francisco.

American Academy of General Practice. April 6 through 9, San Francisco. *Contact:* Mr. M. F. Cahal, Executive Secretary, Volker Blvd. at Brookside, Kansas City 12, Missouri.

Los Angeles County Heart Association Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., Chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

American Academy of Pediatrics Spring Meeting, April 13 to April 15, Sheraton-Palace Hotel, San Francisco. *Contact:* Charles H. Cutler, M.D., state chairman, Northern California Chapter, 2615 I Street, Sacramento.

American Academy of Neurology. April 13 through 18, Statler Hotel, Los Angeles. *Contact:* Joseph M. Foley, M.D., Boston City Hospital, Boston, Secretary.

Cancer Commission, California Medical Association Cancer Conference for Ventura County Medical Society. April 14, Oxnard.*

American Surgical Association. April 15 through 17, Fairmont Hotel, San Francisco. *Contact:* W. A. Altemeier, M.D., Secretary, Cincinnati General Hospital, Cincinnati 29.

Palo Alto Medical Clinic Second Annual Medical Symposia: Cardiology and Immunology, April 18, 8:30 a.m., Clinic Auditorium. *Contact:* John F. Weigen, M.D., program chairman, Palo Alto Medical Clinic, Palo Alto, Calif.

American Society of Internal Medicine 3rd Annual Meeting. April 19, Conrad Hilton Hotel, Chicago. *Contact:* Clyde C. Greene, Jr., M.D., Assistant Secretary-Treasurer, 350 Post Street, San Francisco 8.

American College of Physicians Meeting, Conrad Hilton Hotel, Chicago, April 20-24, 1959. *Contact:* Mr. E. R. Loveland, Executive Secretary, 4200 Pine Street, Philadelphia 4.

Hawaii Medical Association Annual Meeting, April 23 through 25, Hilo. *Contact:* Miss Lee McCaslin, Executive Secretary, 510 S. Beretania Street, Honolulu 13.

MAY MEETINGS

Los Angeles County Heart Association Annual Membership Meeting, May 6, 12 noon, Statler Hotel. *Contact:* C. A. Alexander, executive director, 660 S. Western Avenue, Los Angeles 5.

The Nevada Academy of General Practice Annual Meeting, May 21 through 23, Riverside Hotel, Reno. Program by University of Southern California School of Medicine. *Contact:* Roy M. Peters, M.D., Chairman, 475 S. Arlington Avenue, Reno, Nevada.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

SUMMER AND FALL MEETINGS

Western Branch, American Public Health Association Annual Meeting. June 2 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

Rocky Mountain Cancer Conference, Scientific only, July 22 through 23, 9:00 a.m., Brown Palace Hotel, Denver. *Contact:* N. Paul Isbell, M.D., Chairman, 835 Republic Building, Denver 2, Colorado.

Nevada State Medical Association, Annual Session, jointly with Reno Surgical Society, August 19 through 22, Mapes Hotel, Reno. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, Executive Secretary, 1309 Seventh Avenue, Seattle, Washington.

Western Industrial Medical Association, Inc. 18th Annual Meeting, held in conjunction with Third Western Industrial Health Conference, all day October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

California Society of Internal Medicine Annual Meeting, October 2 through 4, Miramar Hotel, Santa Barbara. *Contact:* Mrs. Mildred B. Coleman, Executive Secretary, or Clyde C. Greene, Jr., M.D., Secretary-Treasurer, 350 Post Street, San Francisco 8.

*Contact: Walter E. Batchelder, M.D., Medical Director, C.M.A. Cancer Commission, 450 Sutter Street, San Francisco 8.



THE PHYSICIAN'S *Bookshelf*

CIBA FOUNDATION COLLOQUIA ON ENDOCRINOLOGY—Volume 12, Hormone Production in Endocrine Tumours—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. and Maeve O'Connor, B.A., Editors for the Ciba Foundation. Little, Brown and Company, Boston, Massachusetts, 1958. 351 pages, including Cumulative Index to Volumes 1-12, with 58 Illustrations, $9.00.

This volume contains the 20 papers presented at the twelfth Ciba Colloquia on Endocrinology. The discussions of each paper as well as the general discussions by the 29 participants are also recorded. The conference set before itself questions concerning the value of modern biochemical technics in the further understanding of endocrine tumors, the nature of the secretory products of these tumors as compared to the secretions of the tissues from which they were derived, the possibility of relating the genesis of the various tumors with a single hypothesis, and the processes by which secreting tumors become independent.

In general, the papers were selected to provide unification of information obtained from the older and newer techniques. The divergence of material and approaches results in a volume which contains work which is useful to the clinical and experimental endocrinologist as well as the individual primarily concerned with experimental tumorigenesis. One third of the volume is devoted to the induction of tumors of the pituitary, thyroid, gonads and adrenals in small animals, as well as the question of hormone dependence of these tumors. The remainder of the book is concerned with studies of the biosynthetic and secretory activity, in vivo and in vitro of human and animal tumors of the thyroid, gonads, adrenal cortex, adrenal medulla, pancreas and placenta. The latter segment contains most of the new material to be found in the volume. Although much of the material presented is not as new as that contained in many of the previous volumes, the general index to the first 12 volumes contained in Volume 12 makes it an especially valuable addition to the medical library.

ALAN GOLDFIEN, M.D.

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PRINCIPLES AND PRACTICE OF MEDICINE—A Textbook for Students and Doctors—Fourth Edition—Sir Stanley Davidson, B.A. Cantab., M.D., F.R.C.P., Ed., F.R.C.P. Lond., M.D. Oslo; Physician to H.M. the Queen in Scotland; Professor of Medicine and Clinical Medicine, University of Edinburgh; Physician-in-Charge, Royal Infirmary, Edinburgh; and The Staff of the Department of Medicine, University of Edinburgh, and Associated Clinical Units. The Williams & Wilkins Company, Baltimore, Maryland, 1958. 1067 pages, $8.00.

The policy of this book as stated in the preface to both the First and Fourth Editions is "that no attempt should be made to describe every rare disease or syndrome, but to devote most of the space available to those disorders most commonly encountered in practice." Thus it presents medicine to the student in comparatively simplified form. This may explain its wide popularity. The preface to this Fourth Edition states that four editions and three large reprints have been published within six years. In addition, the demands for the book from various parts of the world suggest to the author that the style, composition and presentation of material have met with the approval of large numbers of students and doctors.

The reviewer, however, does not think it compares favorably with the better American textbooks on general medicine in completeness or up-to-date application of the basic sciences to clinical diagnosis or therapeutics. For example, tolbutamide therapy is not mentioned in the section on diabetes; steroid therapy, beyond cortisone itself, seems to be regarded with suspicion. The use of trade names peculiar to British pharmaceutical manufacturers would make it necessary for the American student to keep a British pharmacopeia at hand while reading the book.

Two technical criticisms are noted. The binding is poor and had come loose when the reviewer received his copy. Pages 1059-1066 of the index are inserted upside down and backwards.

While this book has merit as an elementary text we regret that we cannot recommend it as a reference for American students.

EDGAR WAYBURN, M.D.

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THERAPEUTIC EXERCISE—Edited by Sidney Licht, M.D., Honorary Member, British Association of Physical Medicine, Danish Society of Physical Medicine, and the French National Society of Physical Medicine. Elizabeth Licht, publisher, 360 Fountain Street, New Haven, Conn., 1958. 893 pages, $16.

This book is Volume III of a series of books on aspects of Physical Medicine. Most physicians are ignorant of this aspect of medical treatment because of poor teaching at the medical school level and a scarcity of good articles in the medical literature. This book has attempted to remedy this by use of 35 chapters all written by different authors on almost every aspect of therapeutic exercise.

The first few chapters discuss the physiology and anatomy of motion in excellent descriptions which is easily understood by every physician. There are other interesting chapters on "Trick Movements," "Crutch and Cane Exercises and Use" and "History." The last half of the book gives the application of exercise in various disorders. The chapter on "Exercise in Hemiplegia" is a particularly interesting one as it discusses the gait problems of a hemiplegic patient in practical clinical form and the conclusions are those with which this reviewer is in complete agreement. The only criticism of this book is that in trying to do so much, it has necessarily been too brief in the clinical application of many forms of exercise.

This book should be read by all physicians who deal with disorders requiring therapeutic exercise and particularly by orthopedists and physiatrists. It should also be available in all medical libraries.

S. MALVERN DORINSON, M.D.

POISONING—A Guide to Clinical Diagnosis and Treatment—Second Edition, W. F. von Oettingen, M.D., Ph.D., National Institutes of Health, U. S. Public Health Service; and U. S. Department of Health, Education and Welfare. W. B. Saunders Company, 1958. 627 pages, $12.50.

In this second edition new descriptions have been added, and old ones refined, but the general character of the book is the same. It is a good presentation of poisoning and poisons, designed primarily for use by medical practitioners.

After a few pages of introductory advice there is a large section on the diagnosis of poisoning. The first portion of this section describes various symptoms and signs and under each lists responsible poisons. Thus "corrosion of the glottis" is described generally as following the aspiration of caustic alkali or acids, or fumes and mists, and specifically the following: acetic acid (conc.), chromates, cresol, formic acid, lye, mercuric chloride, nitric acid, permanganates, phenol, sulfuric acid and zinc chloride. A second portion treats biochemical changes similarly, and an extremely valuable portion lists laboratory tests for the identification of poisons in blood or urine.

The next section deals in a little over 20 pages with general management. Specific ways of removing poisons and treating nausea, pain, coma and the like are described.

The final section on the individual poisons, almost 400 pages, constitutes the major portion of the book. Here are listed poisons from *Abrus precatorius*, an ornamental plant, and absinthe to zinc sulfate and *Zygadenus venenosus*, another plant. As a random example, barracuda poisoning will illustrate the format of the individual monographs. Barracuda is described as generally edible but to have caused repeated food poisoning. Toxicity appears to be seasonal but the cause is not known. Symptoms appear after a few hours and include metallic taste, nausea, diarrhea, strange paresthesias and pruritis, and finally shock. There may be visual disturbances and difficulty in swallowing. Treatment is then considered in a few lines (no specific measures) and there are references to the literature.

This book should be compared with two other prominent and valuable books on poisoning. That by Gleason, Gosselin and Hodge is larger and more encyclopedic. The rarest and most mysterious poisonings and the greatest list of trade names will be found in this classic reference work. Still it is admirably arranged and serves physicians well. The other book, by Dreisbach, has the advantage of having an amazingly complete coverage of toxicology packed into its pocket size. The Dreisbach is less expensive and also has some advantages in organization. For instance, one looks in vain for the word insecticide in the index or as an individual monograph in von Oettingen, while this leads to a useful section in Dreisbach, and incidentally to a more satisfactory text if used in teaching. The reader is fortunate in having these extremes of choice in good, modern toxicologies.

WINDSOR CUTTING, M.D.

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CALLANDER'S SURGICAL ANATOMY—Fourth Edition—Barry J. Anson, M.A., Ph.D., (Med. Sc.); Chairman, Department of Anatomy, and Robert Laughlin Rea Professor, Northwestern University Medical School, and Member of the Staff, Passavant Memorial Hospital; and Walter G. Maddock, M.S., M.D., F.A.C.S.; Edward S. Elcock Professor of Surgery, Northwestern University Medical School, and Chairman of the Department of Surgery, Chicago Wesley Memorial Hospital. W. B. Saunders Company, Philadelphia, 1958. 1157 pages, $21.00.

A comparison of the two editions, that of 1952, the third edition, and the present fourth edition is of value. To the publisher's credit is the new type which although about the same size is more easily read than that of the third edition. Although the titles to the subdivisions and those heading the topics and the surgical discussions are set in black face type which makes the finding of the sections easier for the reader. The fourth edition has 1047 illustrations, 118 more than the third edition. The frontispiece which diagrams the autonomic nervous system is in color. A new feature of the fourth edition is its dedication to the author's former teachers, namely, Frederic Thomas Lewis, Ph.D., of Harvard and Fredrick A. Coller of Michigan. In this reviewer's opinion the Callander's Surgical Anatomy has been the best of all the surgical anatomy texts. The authors of the fourth edition have carried on by retaining the fundamental architecture of the earlier editions and only modifying the constituent elements wherever amplified knowledge of structure or improved technical procedures called for closer adaptation to present-day use of the book. For instance the operation of stapes mobilization has been described since the last edition so a section has been added on the detailed anatomy of the stapes plus an illustration from Schambaugh's "Surgery of the Ear" (a text book in preparation) detailing the technique of stapes mobilization.

An improvement of the fourth edition over the third can be seen in the section on radical operation for carcinoma of the breast. There are anatomical studies outlining the retrosternal glands which have been included in the supra-radical dissections being done as a routine in some parts of the country. Another improvement in this section is made by including all the illustrations relating to radical dissections in that section of the treatise rather than carrying them on through the sections relating to diaphragm and other parts of the anatomy.

On the whole it can be said that the fourth edition makes a good book better and brings the knowledge up to date in a most satisfactory manner. Callander's Surgical Anatomy is recommended not only for the student and general surgeon, but for the teacher who wishes to recommend a work where his student can get an accurate picture of required surgical anatomy in a form easily absorbed and remembered. The wealth of good illustrations in the fourth edition helps immensely with this problem.

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ADVANCES IN ELECTROCARDIOGRAPHY—Edited by Charles E. Kossmann, B.S., M.D., Med. Sc.D., F.A.C.P., Associate Professor of Medicine, New York University College of Medicine. Grune & Stratton, Inc., 381 Fourth Avenue, New York, 1958. 280 pages, $9.75.

Kossmann's volume on *Advances in Electrocardiography* is the outgrowth of a course that Dr. Kossmann and his associates have given at New York University College of Medicine for the past ten years. Because of the general interest and the enthusiastic acceptance by physicians who wanted an advanced course in electrocardiography, Dr. Kossmann and his associates prepared the current volume. It is fairly technical and presents the electrophysiologic view of concepts underlying modern electrocardiography. As such it will be of great interest to the physician who wishes to know more than standard patterns of disease.

The material covered in the book includes the bioelectrics of the myocardial cell, a discussion of the action potential of cardiac factors and the Dipole theory; and there are also a varicty of chapters devoted to the spread and excitation and normal and abnormal recovery. There are detailed chapters on conduction defects, injury patterns, hypertrophy, and congenital heart disease. Arrhythmias are discussed to a lesser degree, but from a physiologic standpoint. Each chapter has an excellent bibliography which is very helpful.

The book can be highly recommended for those individuals who wish to understand more about the fundamental aspects of electrocardiography. It is well illustrated, excellently written, and amply documented with references.

WHAT WE DO KNOW ABOUT HEART ATTACKS—John W. Gofman, M.D., Professor of Medical Physics, University of California, Berkeley. G. P. Putnam's Sons, New York, 1958. 180 pages, $3.50.

What We Do Know About Heart Attacks is a persuasive analysis by Gofman of his point of view that the atherosclerotic index and the blood pressure are the two factors which will allow a physician to predict that an individual patient has a greater than average risk of developing a myocardial infarction in the near future. The book is extremely well written, very lucid, and the author asks pointed questions and attempts to answer them. A great deal of data from a variety of publications is included, but there is no bibliography, and the precise source of some of the data is not immediately available. The author does not append any data relating to the relative value of the measurement of serum cholesterol as contrasted to the atherosclerotic index as a predictive guide despite the well-known belief in some circles that the total cholesterol is about as good as the atherosclerotic index in this regard and is much less expensive to perform, and requires less equipment.

The section on diabetes is perhaps oversimplified, and the author has not proved his point that diabetes accelerates atherosclerosis solely by influencing the atherosclerotic index. There may well be other factors involved.

The reviewer regrets that the author found it necessary at times to be sarcastic when referring to scientists who disagreed with his position, but this only emerges on occasion. The book can be recommended as a highly readable, clear account of at least two factors important in the development of coronary heart disease. Many of the questions that Dr. Gofman raises are extremely important and may lead to fruitful inquiry. This is true of his question: "Why is it that certain people in the population have low levels of the lipoproteins with our usual diets while others have intermediate levels, and still others have high levels?"

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CLINICAL RADIOLOGY OF ACUTE ABDOMINAL DISORDERS—Bernard S. Epstein, M.D., Chief, Department of Radiology, The Long Island Jewish Hospital, New Hyde Park, New York; Associate Clinical Professor of Radiology, Albert Einstein College of Medicine, Yeshiva University, New York, New York. Lea & Febiger, Washington Square, Philadelphia 6, Pa., 1958. 352 pages, with 406 illustrations, $15.00.

The importance of sound clinical radiology in the diagnosis of acute abdominal disorders is now well recognized. This monograph summarizes radiologic findings in a series of four chapters headed respectively: Congenital disorders, neoplastic diseases, inflammatory disorders (parasitic and granulomatous diseases, collagen disturbances, metabolic disturbances, vascular disorders), and traumatic disorders (including foreign bodies and effects of drugs).

Under the congenital disorders, the author considers the roentgen diagnostic aspects of some twenty-five different conditions ranging from diaphragmatic hernia through various mal-rotations, volvulus, reduplications, and pancreatic disorders to anomalies of the biliary tract, microcolon and congenital absence of the spleen.

The neoplastic diseases considered cover the various tumors of the stomach, small and large bowel, and the various solid abdominal viscera. The author comments on the malignant potential of polyps. This of course is a commonly repeated misconception. If one studies the prevalence of colon polyps and of colon cancer in adults between the ages of 50 and 80, one notes a ratio of approximately 100 to 1. A small percentage of colon polyps do apparently degenerate into cancer. More important, a small polypoid carcinoma is grossly indistinguishable from a small polypoid adenoma. However, the undue fear regarding polyps should not be perpetuated. The legend for figure 91 does not quite match the illustration; the latter shows a lesion in the descending colon rather than the splenic flexure and no evidence is adduced to prove that the neoplasm arose in the pre-existing polypoid lesion; it may have done so, or the lesion may have been cancer *de novo*.

The inflammatory and miscellaneous disorders include peptic and non-peptic ulcerations, the various types of colitis, adenitis, hepatitis and rarer granulomas.

The final chapter deals with traumatic lesions of the diaphragm, the solid viscera, and the intestinal tract; entities such as arteriomesenteric duodenal obstruction, radiation effects, drug effects, and allergy. In this chapter, the author notes an estimated small bowel tolerance of 2500 r (orthovoltage) and 4500 r (megavoltage). These figures require qualification as to the volume of tissue irradiated and the number of days of treatment. He notes that "the effects of radiation injury of the small bowel due to megavoltage therapy are more likely to be extensive fibrosis and perforation."

The work is well prepared and well illustrated, and covers even more than the title or size indicates. There are excellent suggestions for additional reading. The monograph can be recommended to all radiologic residents and to most clinical radiologists. The author is Chief of the Department of Radiology of the Long Island Jewish Hospital and Associate Clinical Professor of Radiology at the Albert Einstein College of Medicine in New York. There is a good author and subject index.

L. Henry Garland, M.B.

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WAKING BRAIN, THE—H. W. Magoun, Ph.D., Department of Anatomy, School of Medicine, University of California, Los Angeles, California; Veterans Administration Hospital, Long Beach, California. Charles C. Thomas, Publisher, Springfield, Illinois, 1958. 138 pages, $4.75.

This short book presents in a concise fashion the latest thought regarding the brain as a thinking organ. There is nobody more competent to present the material than Professor Magoun, since he and his group have been responsible for much of the research in the field. The fact that it will not be found easy to follow by most physicians is inherent in the complexity of the subject. This is not a book to be picked up and read in an evening, and it is unlikely that a reader not fairly well up on modern technics in neurophysiology will come away with more than a superficial knowledge of the subject. However, it represents the best comprehensive review of progress relating to the brain as seen from the standpoint of its dynamic function that has so far appeared.

Henry Newman, M.D.

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SYSTEMIC OPHTHALMOLOGY—Second Edition—Edited by Arnold Sorsby. The C. V. Mosby Co., St. Louis, Missouri, 1958. 682 pages, with an index of 19 pages, $25.00.

This second edition is very comprehensive in its scope. The contributors are outstanding in their fields. The arrangement and the subdividing makes the book very readable as well as interesting.

The common systemic diseases involving the optical system as well as the rare ones are diagnosed and the newest treatments discussed.

This book because of its contributors' stature can be used as a handy reference.

Today an ophthalmologist is often asked to assist the referring internist in a diagnostic problem. This text book offers great help in providing a solution to many such problems.

Alfred R. Robbins, M.D.

NEUROLOGICAL BASIS OF BEHAVIOUR—Ciba Foundation Symposium—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Little, Brown and Company, Boston, 1958. 400 pages, with 109 illustrations, $9.00.

This book contains the proceedings of a symposium held in London in 1957, under the auspices of the Ciba Foundation, in commemoration of the hundredth anniversary of the birth of the great physiologist Sir Charles Sherrington. Quite properly it deals with the function of the nervous system which was Sherrington's chosen field. The participants include almost all the well known figures in the field of neurological research. Although the presentations of individual subjects is by an authority in that field, the discussion that followed is most illuminating in presenting the thoughts of others in relation to the problem which is helpful in allowing the reader to form his own opinion of the acceptance of the theory presented. Although all physicians will not want to read the book in its entirety, it is an extremely useful reference work and saves a great deal of time that would be required to search out the contributions presented here under one cover.

HENRY NEWMAN, M.D.

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PROGRESS IN RADIATION THERAPY—Edited by Franz Buschke, M.D., Professor of Radiology, University of California School of Medicine, San Francisco, with 13 contributors. Grune & Stratton, Inc., New York, 1958. 284 pages, $9.75.

In the introduction to this monograph on certain aspects of recent progress in radiation therapy, the editor paraphrases Berenson: "There seems to us a tendency to look on change as meaning improvement, on motion as synonymous with advance. Advance means progress to something better, and not progress to something new; some of the more significant advances have lain in the rejection of innovations and re-development of methods once rejected." The editor goes on to stress the importance of sound clinical judgment in radiotherapy, careful correlation of radiologic physics and gross pathology, and constant cooperation with colleagues in associated disciplines. Better training of radiologists, better understanding of biologic effect of radiation, and better appreciation of patient tolerance are regarded as prime components of recent progress.

The book is divided into a series of thirteen chapters, the first two dealing with a short history of radiation therapy and of radiation sources for cancer therapy.

There is then a series of three chapters dealing with biologic effects, time-dose relationship and chemical modification of radiation effects. There is an important chart published on page 107 illustrating skin tolerance for different sizes of fields, using protracted irradiation. In subsequent editions it would be worthwhile enlarging this chart, since it is one of the clues to the importance of "sensible" protraction.

There is then a series of eight chapters dealing with more specific items, such as the significance of the cytohistologic response in radiotherapy of carcinoma of the cervix, the radiocurability of renal embryoma, the results of radiotherapy of malignant intracranial neoplasm, and the tolerance of the central nervous system to irradiation. There is an excellent chapter on the present status of radiotherapy in carcinoma of the thyroid, a rather long one on the treatment of non-malignant diseases of the eye and a philosophic disquisition on radiotherapy as a medical specialty.

Jean Bouchard stresses in the chapter on radiotherapy of brain tumors that he prefers orthovoltage (energy levels of 0.25 MEV) and careful crossfiring to megavoltage. He states his belief, "that there are not many cases of intracranial neoplasms which are really suitable for rotational technique. Certainly, in the treatment of pituitary tumors, I would use only small lateral opposing fields in order that a minimum volume of cerebral tissue be irradiated."

The thirteen authors come from various parts of the United States, Canada and France. Most of them are clinical radiologists, and some effectively function or did function for many years in both the diagnostic and therapeutic spheres. This point is mentioned because the continuation of availability of good clinical radiotherapy in smaller cities in this country requires that the radiologist be competent in both diagnosis and therapy.

This reviewer noted only two minor errata. On page 21, second paragraph, the author of the entertaining quotation is not given. On page 27, last paragraph, the term "beps" should undoubtedly be "reps." The work is nicely printed and illustrated.

L. H. GARLAND, M.B.

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PEDIATRIC INDEX—A Guide to Symptomatological Diagnosis and Current Management—Edwin F. Patton, M.D., Beverly Hills, California. The C. V. Mosby Company, St. Louis, Mo., 1958. 639 pages, $13.50.

This volume is a guide to symptomatological diagnosis and current management of pediatric disease. Any approach to the study of a patient by way of his leading complaints is most likely to be rewarding in the hands of an experienced practitioner. Accordingly, the busy pediatrician, general practitioner, or teacher of clinical pediatrics is likely to feel at home using this book, and to find it helpful. It would be less appropriate in the hands of a medical student. It consists of two main parts—the first, a symptom index intended to suggest the correct diagnosis; the second, a reminder of possible differential diagnoses and confirmatory tests and procedures which may prove useful.

Much depends on the thoroughness with which this sort of an approach is carried out. In the present instance the author has done an excellent job in this respect. The manner of presentation and ease of scanning is also to be commended. It is predicted this book will prove useful and popular.

WILLIAM DEAMER, M.D.

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PHYSICAL EXAMINATION OF THE SURGICAL PATIENT—J. Englebert Dunphy, M.D., F.A.C.S., Professor of Surgery, Harvard Medical School; Director of 5th Surgical Service and Sears Surgical Laboratory, Boston City Hospital; Consultant in Surgery, Children's Medical Center; and Thomas W. Botsford, M.D., F.A.C.S., Clinical Associate in Surgery, Harvard Medical School; Senior Associate in Surgery, Peter Bent Brigham Hospital; Associate in Surgery, Children's Medical Center. Second Edition. W. B. Saunders Company, Philadelphia, 1958. 375 pages, $8.00.

This book of somewhat over 300 pages and over 200 illustrations is a book of procedure and technique in the examination of a surgical patient. It is divided into two parts; namely, the elective examination and the emergency examination. Each of these is again subdivided into procedures relating to the specific anatomical area being examined, and stresses not only the history but also findings which might be elicited in a given area. It is written for the specific needs of student, house officer and practitioner of medicine. It is indeed a book which any physician, regardless of specialty, might well use to refresh himself. The reviewer found the book most interesting and he was impressed and marvelled that so much knowledge could be imparted in such a short treatise. The authors have given concise, yet detailed, information. Likewise, the book is well illustrated and one might say well worth the money.

C. J. BAUMGARTNER, M.D.

PROGRESS IN CARDIOVASCULAR DISEASES—Progress in Cardiac Surgery—Edited by Charles Friedberg, M.D. A Quarterly Publication. Grune & Stratton, Inc., 381 Fourth Avenue, New York City 16. Volume 1, Number 1, 108 pages. Price: Subscription to Volume 1 (four successive issues) $8.00 in U.S.A., $10.00 elsewhere; single-issue price, $3.00.

This monograph is Vol. 1, No. 1 of a quarterly journal devoted to progress in cardiovascular diseases. The first volume very appropriately deals with cardiac surgery which has been responsible for the greatest progress in cardiology within the past ten years. The authors are all internationally known stars who summarize various facets of the subject, bringing the reader up to date. Reviews of the bibliography quoted in the articles reveals that references of 1957 and 1958 are included, indicating that the articles are right up to the minute, providing the best variety of postgraduate information. The authors include Doctors Friedberg, Wood, Hufnagel, Swan, Gibbon, Jr., Kirklin, Morrow, Cooley, and Baffes.

The volume can be strongly recommended for all physicians interested in the current status of cardiac surgery.

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ALCOHOLISM AND CALIFORNIA RELATED STATISTICS—1900-1956—State of California Department of Public Health—Prepared for the Division of Alcoholic Rehabilitation, John R. Philp, M.D., Chief. 127 pages.

This is a very well done compilation of statistics on the prevalence of alcoholism and its effect on public health and welfare. One is struck by the low spot in the graphs of incidence corresponding to the period of Prohibition. It is of considerable interest to compare the incidence of alcoholism in various localities and at various times, and the magnitude of the problem of the intemperate use of alcohol is well conveyed by the figures presented.

HENRY NEWMAN, M.D.

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THE URETEROVESICAL JUNCTION—The Theory of Extravesicalization of the Intravesical Ureter—John A. Hutch, M.D., Clinical Instructor of Urology, University of California, San Francisco. University of California Press, Berkeley, California, 1958. 178 pages, $7.50.

This small volume is a report of the work done and the conclusions reached by the author in his exhaustive study of upper urinary tract dilatation and urinary reflux, one of the most difficult and controversial problems in the field of urology. It must still be considered to a considerable degree unsolved, though the author's tremendous experience and numerous contributions to the current literature have made his name synonymous with the latest thinking on the subject. Probably no one speaks with greater authority, and the Hutch operation approaches at least the status of a standard procedure, though the author would doubtless admit that it is by no means universally successful. Whether this is due to a defect in the basic concept of the etiology, to poor surgical technique, or to an irreversible stage of the pathology, the urologist must decide for himself. The author indicates that in his hands he obtains 84 per cent of satisfactory results, and that of 252 operations reported to him by other operators, 74 per cent were considered successful. Since successful operations are more apt to be reported it seems likely that these results are somewhat better than can be expected by the average urologist.

In the first part of the book the author discusses the condition as it occurs in the paraplegic, basing his opinions on an experience of 10 years in the Veterans' Administration Hospital in Richmond, Virginia, and in the California Rehabilitation Center in Vallejo. He attempts to explain the development of hydroureter and reflux on the anatomical changes occurring in the spastic bladder and presents two proposals for the correction of the condition. The first is the uretero-vesical plastic procedure with which his name is associated—the operation mentioned above—and the second is sacral rhizotomy, by which the abnormal nerve impulses to the bladder are interrupted and the spasticity reduced. The technique of his own operation is well described.

The second part of the work is concerned with the occurrence of hydroureter and reflux associated with bladder neck obstruction and also as found in children. His final chapter is an outline of the management of "hydroflux," as he calls it, in patients in all categories, with brief comments on the advantages and disadvantages of each procedure.

There is no doubt that anyone interested in this very difficult problem, whether urologist, neurologist, or neurosurgeon, must be familiar with all the important contributions to the subject, and there is no one better fitted to speak authoritively than the writer of this work. Without adequate personal experience, which few urologists have, one is hardly competent to question either the accuracy of his conclusions or of his therapeutic claims. But every urological or neurological surgeon should by all means have the book and make himself thoroughly familiar with its contents.

LYLE G. CRAIG, M.D.

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SIR CHARLES BELL—His Life and Times—Sir Gordon Gordon-Taylor, K.B.E., C.B., F.R.C.S.; Honorary Consultant Surgeon to the Middlesex Hospital, and E. W. Walls, M.D., Ch.B., B.Sc., F.R.S.(Ed.); S.A. Courtauld Professor of Anatomy in the University of London at the Middlesex Hospital Medical School. The Williams & Wilkins Co., Baltimore, Maryland, exclusive U. S. agents for E. & S. Livingstone Ltd., Edinburgh and London, 1958. 288 pages, $8.50.

Gordon-Taylor and Walls have produced a vivid and intensely interesting biography of a great surgeon and anatomist, Sir Charles Bell. Not only are the facts of his life presented but they are admirably set against an account of his times, a feature neglected by many biographers. Of greatest interest of course is the highly exciting story of Bell's famous controversy with Magendie and with Mayo which is dealt with in interesting detail; exactly what went on in Bell's mind, usually so clear and fair, is not settled.

The book is well gotten up and it is enlivened by numerous pertinent illustrations of Bell's dissections, his haunts and other interesting material. A complete bibliography of Bell's writings concludes this fine volume.

ARTHUR L. BLOOMFIELD, M.D.

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HANDBOOK OF MEDICAL TREATMENT—Sixth Edition—Milton J. Chatton, M.D., Director of Medical Institutions, Santa Clara County, California; Superintendent of Santa Clara County Hospital, San Jose, California; Assistant Clinical Professor of Medicine, University of California School of Medicine, San Francisco; Sheldon Margen, M.A., M.D., Associate Research Biochemist, Department of Physiological Chemistry, and Clinical Instructor in Medicine, University of California School of Medicine, San Francisco; and Henry Brainerd, M.D., Professor of Medicine and Chairman, Department of Medicine, University of California School of Medicine, San Francisco, and Physician-in-Chief, University of California Hospitals, San Francisco. Lange Medical Publications, Los Altos, California, 1958. 569 pages, $3.50.

This popular handbook of medical treatment has now come out in its sixth edition since 1949. The authors have again done an excellent job of revision. It is characteristically jampacked with therapeutic facts from cover to cover. We can recommend it freely as a ready reference for the coat pocket of the student and intern as well as for the medical bag of the practicing physician.

EDGAR WAYBURN, M.D.

ATRIAL ARRHYTHMIAS, DIGITALIS AND POTASSIUM—Bernard Lown, M.D., Research Associate in Medicine, Department of Nutrition, Harvard School of Public Health; Junior Associate in Medicine, Peter Bent Brigham Hospital, Boston, Mass., and Harold D. Levine, M.D., Senior Associate in Medicine, Peter Bent Brigham Hospital, Boston, Mass.; Assistant Clinical Professor of Medicine, Harvard Medical School. Landsberger Medical Books, Inc., 51 East 42nd Street, New York, N. Y., 1958. 220 pages, $6.90.

This small monograph can be heartily recommended as an up-to-date account of the important relationship among atrial arrhythmias, digitalis and potassium. The book is an extension of the author's previous book published in 1954 and documents with case histories and frequent electrocardiograms the inter-relationships among the three factors noted in the title from a diagnostic and therapeutic standpoint. The authors are well known as having been among the leaders in emphasizing these relationships and, therefore, their work is highly authoritative as well as informative.

It is not clear to the reviewer why a new book was written rather than a revision of the old one, but perhaps this is due to the change in emphasis. There is a comprehensive bibliography of 198 references which is most valuable.

The binding of the volume presented for review was inferior, and it is hoped that the publisher corrects this in the future production.

The book can be highly recommended to all physicians.

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REHABILITATION MEDICINE—A Textbook on Physical Medicine and Rehabilitation—Howard A. Rusk, M.D., Professor and Chairman of the Department of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, New York, N. Y., and thirty-six collaborators, with the editorial assistance of Eugene J. Taylor, A.M. The C. V. Mosby Co., St. Louis, 1958. 572 pages, $12.00.

This book actually represents the experiences and lessons learned in the management and rehabilitation of a rather vast array of disabilities by the staff of one of the largest and finest rehabilitation facilities in the world: The Institute of Physical Medicine and Rehabilitation, with its associated rehabilitation services at Bellevue Hospital, Goldwater Memorial Hospital, University Hospital, and other rehabilitation facilities in New York City. The opinions and conclusions as to proper rehabilitative techniques are the results of over a decade of experience in this relatively new concept of medical management.

The book contains twenty-seven chapters, each dealing with a specific facet of rehabilitation or long-term management of chronic disease. Although all of these yield valuable contributions to the reader's knowledge of rehabilitation principles, some of them are outstanding. For example, the excellent chapter on rehabilitation nursing should be required reading for every student nurse or for any type of nursing training program. The average general duty nurse knows far too little about the special techniques of nursing care that is required by seriously disabled patients; for example, the paraplegic.

There is a chapter on braces, crutches and wheelchairs that could be an eye-opener to most physicians, regardless of specialty. As an example of this, the chapter points out the various types of wheelchairs and special modifications thereof to suit the particular needs of a disabled individual in terms of ease of locomotion, safety, transfer from wheelchair to a bed or toilet, and sitting comfort. Such factors, which can contribute so much to the welfare of a handicapped person, are largely ignored by physicians.

The chapter on training the disabled housewife or homemaker to function with maximum efficiency in the kitchen and home through the use of special adaptive devices and aids should be most helpful to the public health or visiting nurse. Occupational therapists should also find this valuable. Social workers and vocational counselors will find chapters thirteen and fourteen very informative.

There is an excellent chapter on management and rehabilitative techniques for patients disabled by metabolic diseases. Of these, the portion of the chapter devoted to arthritis is outstanding.

In summary then, here is a most worthwhile book—an essential for the physician who directly is concerned with rehabilitation of the physically handicapped, be he physiatrist, neurologist, orthopedist, or internist; a most valuable source of information for the general practitioner, nurse, physical and occupational therapist, social worker, and all the various disciplines which participate in the rehabilitation of the physically disabled. Doctor Rusk, the author, and his collaborators are to be most highly commended for a concise and complete presentation of what the reviewer feels is a much needed work.

KARL E. CARLSON, M.D.

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SOCIAL PSYCHIATRY IN ACTION—A Therapeutic Community—Harry A. Wilmer, M.D., Ph.D., Captain, Medical Corps, United States Naval Reserve, Naval Medical Research Institute, National Naval Medical Center, Bethesda, Maryland; Assistant Clinical Professor of Psychiatry, Stanford University (on military leave); foreword by Francis J. Braceland, M.D., Psychiatrist-in-Chief, Institute of Living, Hartford, Connecticut; preface by Rear Admiral Bartholomew W. Hogan, The Surgeon General, United States Navy. Charles C. Thomas, publisher, Springfield, Illinois, 1958. 373 pages, $8.75.

This is a rather interesting and well-written book describing the author's experience in operating the admission ward of a large Naval Hospital as a "therapeutic community." The main difference between the "therapeutic community" and any other psychiatric ward seems to be that there is a measure of self-government, and an opportunity for the patients and staff to meet on common ground for discussion of their problems. Dr. Wilmer maintains that this concept greatly improved the management of cases admitted to the hospital, although with the short stay that they had on the admission ward it is hard to evaluate this. One who knows Dr. Wilmer is more inclined to attribute any improvement to his understanding and enthusiasm, with attendant greater number of man-hours devoted to patient care, than to the system used; perhaps both played a part. The book should be of interest to psychiatrists and others having to do with the care of the mentally ill.

HENRY W. NEWMAN, M.D.

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APPLIED PHYSIOLOGY OF THE EYE—H. Willoughby Lyle, M.D., F.R.C.S.; assisted by E. Keith Lyle, C.B.E., M.A., M.D., M.Chir., M.R.C.P., F.R.C.S. Bailliere, Tindall & Cox, London, 1958. Distributed by Williams & Wilkins Company, Mt. Royal & Guilford Aves., Baltimore 2, Md. 341 pages, $9.00.

A small compact book well written by an English authority on this subject. The discussion of physiology also includes extensive neurological subject matter.

The new trend seems to be in brevity which in our rapidly moving age is becoming necessary.

The discussion of the higher center relationship including the auditovestibular system is excellent. The correlation of ocular, labyrinthine and neck reflexes is very interesting.

Newer concepts of allergy and the use of vitamins is discussed.

An interesting accessory is a list of works with their Greek derivation. Following this is a list of ophthalmological eponyms, which is quite good. A well worthwhile book.

ALFRED R. ROBBINS, M.D.

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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Volume 90 MARCH 1959 Number 3

Anticoagulant Drug Treatment of Coronary Artery Disease

JOHN MARTIN ASKEY, *M.D.*, Los Angeles

• **Anticoagulant therapy of arteriosclerotic heart disease may prove to be most valuable when applied on a long-term basis for prevention of recurrent myocardial infarction. While its prophylactic value in impending infarction has not been established, at least the accepted treatment for the acute stage is already begun if an anticoagulant has been administered before an inevitable infarction occurs.**

The chief value of the anticoagulant, though, seems to lie in preventing cardiac mural thrombosis and extracardiac thromboembolism. It is by this effect, apparently, that mortality has been reduced by 50 per cent among survivors of myocardial infarction who receive continuous dicoumarin therapy.

While the danger of hemorrhage is still present, it is being steadily reduced by increasing skill in the management of anticoagulant therapy, and for a long time the risk has been far outweighed by the reduction in coronary occlusion.

Physicians have a duty to learn the use of anticoagulant therapy, obtain the facilities necessary for it, and apply it to patients who are able and willing to cooperate in prolonging their useful lives.

ARTERIOSCLEROTIC HEART DISEASE causes over 400,000 deaths annually in the United States,[27] and most of these deaths are due to thrombotic coronary artery occlusion. The ideal treatment is largely a problem of preventive medicine. Hand in hand with measures for the prevention of the primary atherosclerosis must go those for the prevention of secondary thromboembolic complications. The question of possible salvage from antithrombotic drug therapy for prevention of death in myocardial infarction is highly debatable. In 1954 the Committee on Anticoagulants of the American Heart Association concluded from a study of 1,031 cases that the death rate could be reduced by one-third.[28] There are those, however, who still reject the drugs outright; others who would use them only in acute infarction for what they consider "bad risk" cases; and there is the same committee's opinion that anticoagulants should be given prophylactically for three to four weeks in all cases unless contraindicated by a risk of severe bleeding. Still more dubious is the status of long-term anticoagulant drug therapy for preventing a recurrence of myocardial infarction in survivors of the first attack. Some physicians never use long-term therapy, others wait for a second attack or other signs of thromboembolism, and others would use it in every case in which it is not contraindicated. These different interpretations arise from clinical and pathologic statistical studies that are necessarily imperfect. The chances for error in the random selection of patients, and for error and bias in observation, are too great for a perfectly controlled study. The only statistically

Presented as part of a Symposium on Treatment of Intravascular Clotting at the American Heart Association meeting at San Francisco, October 24 to 26, 1958.

Submitted January 16, 1959.

perfect study of anticoagulant therapy would be by the double-blind placebo technique, and such a study is impracticable, especially in the evaluation of long-term therapy.[16]

Despite certain unavoidable technical flaws, the committee's study of 1,031 cases was the most comprehensive possible. Other reports which have disagreed are based on series that were either numerically too small or inadequately controlled. Shall we act on evidence which is only presumptive and not conclusive? Many crucial clinical decisions are based on just such evidence. As Samuel Butler said, the art of good living consists in the "ability to come to adequate conclusions from inadequate evidence." This applies equally well to the art of good medicine. Immanuel Kant put it more incisively: "Again and again it is necessary to take a decision on the basis of knowledge sufficient for action but insufficient to satisfy the intellect."

One might wish that the evidence for anticoagulant therapy were flawless enough to satisfy the intellect of all clinicians, but it is sufficient, I believe, for therapeutic action.

This discussion of the treatment will be limited largely to the coumarin derivatives. Heparin, although quicker and more potent, does not maintain an adequate anticoagulant effect longer than 16 to 18 hours without repeated injections. Therefore, its usefulness, except for the lipolytic effect, is limited to thromboembolic attacks and to the first few days of acute myocardial infarction. There are many questions that must be answered about antithrombotic therapy:

First: In patients with symptoms of impending myocardial infarction, can early treatment prevent the attack? Presumably this would occur through prevention of thrombosis. The results have been disappointing and certainly not convincing.[7,22,23]

Second: Can anticoagulant therapy prevent propagation of a coronary arterial thrombus that has already occluded a vessel? Theoretically it should, but the available evidence does not support the assumption.[5]

Third: Can it prevent cardiac mural thrombosis? In a number of studies analyzing necropsy data on patients who had had acute myocardial infarction it was concluded that mural thrombosis was prevented in about half the treated group.* The Committee on Anticoagulants noted, though, that "relatively few of the participating physicians gave doses the first three days sufficiently high to achieve optimal therapeutic levels by the fourth or fifth day of dicumarol therapy." This failure in early treatment apparently could account for the failure to prevent mural thrombi in a larger number of cases, and argues for the early administration of heparin as well as dicoumarin. As regards long-term therapy, Bjerkelund's necropsy study (the only adequate controlled necropsy study I could find), disclosed a left ventricular mural thrombus in only one of nineteen treated patients compared with six of twenty-four controls.[4]

Fourth: How is extracardiac thromboembolism affected? The clinical diagnosis of thromboembolism is notoriously inaccurate. The committee observed that venous thrombosis and embolism of the lungs, brain, abdomen and extremities seemed to be significantly reduced, and necropsy data accorded with this conclusion. Among untreated patients, emboli, with or without infarction, averaged 125 per 100 cases, as against 45 per 100 of the treated. The main antithrombotic effects in acute myocardial infarction, therefore, are in the prevention of cardiac mural thrombi and extracardiac thromboembolism.

Fifth: Can continuous dicoumarin therapy prevent recurrent coronary artery thrombosis and reduce mortality? Nichol and Fassett[18] first suggested that it might in 1947. All the long-term studies of survivors of acute myocardial infarction, ranging from two to ten years' observation, have shown a reduction in mortality among the treated group to half or less of the rate in the untreated group. Bjerkelund's study of 119 treated and 118 untreated patients, whom he kept under observation for three to three and a half years, is one of the most carefully controlled of the long-term studies, and is the only one in which necropsy data is available on both groups. He reported a reduction of 45 per cent in recurrent infarction and of 37 per cent in mortality from cardiovascular disease. At necropsy of 43 patients, coronary thrombosis was noted twice as frequently in the control group as in the treated. Suzman, Ruskin and Goldberg,[24] and Manchester[15] found a significant reduction in mortality from recurrent infarction in treated patients observed from four to ten years. Other studies, although not well controlled, have shown a considerably less than the statistically anticipated mortality for two to three years following the initiation of anticoagulant prophylaxis.[12,17,19,25]

Sixth: What are the risks of bleeding? First, it should be emphasized that a risk of serious bleeding is the only justifiable contraindication to anticoagulant therapy. A little bleeding ordinarily cannot kill; a little clotting can. Second, the risk of bleeding incurred by anticoagulant therapy cannot be judged except by comparison with a comparable control group. Third, the details of treatment must be considered. Reports of hemopericardium and other effects of bleeding incurred by overdosage are irrelevant to evaluation of a drug whose contraindications and method of administration are now fairly well delineated. Most reports on serious hemorrhagic

*References 8, 9, 11, 13, 28.

complications reveal such deficiencies of methods.† Intracardiac hemorrhage and rupture are the major hazards from anticoagulant therapy in acute myocardial infarction. In mild infarction this danger is negligible, and in a large series comprising both mild and severe cases it is still small. The committee estimated that in each 100 cases treated, anticoagulant therapy might be expected to cause two more deaths from rupture or hemorrhage than would be expected without this treatment. "This regrettable loss," the committee added, "fortunately is counterbalanced by a substantially lower expectation of death due to thromboembolism." In long-term therapy, the statistical incidence of moderate or severe bleeding has been about once every 13 to 20 years of treatment per patient. Serious episodes have been those of cerebral hemorrhage in patients with hypertension.

DISCUSSION

If one dismisses the radical view (which was expressed recently to me in a personal communication) that since anticoagulant drugs are used to kill rats, they should not be used in man, there are reasons behind the fairly clear-cut areas of agreement and disagreement that exist among clinicians. The available evidence receives varying interpretations as it passes through the thinking man's cerebral filter. Anticoagulant therapy is theoretically indicated in impending myocardial infarction even though its benefit in this situation is not measurable. Probably by the time the thrombotic milieu signals its presence with persistent angina, it is too late in most cases to prevent the impending occlusion, except by rendering the blood absolutely incoagulable. Moderate reduction of coagulability, however, may prevent coronary thrombosis in some cases. Moreover, it should diminish the size of the occluding thrombus and, in any case, if thrombosis occurs, the recommended therapy for the acute attack and for later prophylaxis is already initiated. Most observers who have had long experience with anticoagulants believe that in acute myocardial infarction, under proper conditions, the benefit of the drugs exceed the danger in the "good-risk" cases of low mortality, and even more so in severe cases. Burchell[6] sums up anticoagulant therapy in good-risk cases: "We are willing to give anticoagulant therapy to 100 or more patients with the hope of preventing one death." Long-term therapy, in the general opinion, is most beneficial for older patients with recurrent infarction or thromboembolism, but Bjerkelund[4] found the greatest benefits in patients under 60 years who had had only one infarct. The death rate in such patients was significantly reduced in the first year of observation. He suggested that the energy available for treatment would be most profitably expended on long-term therapy of relatively young patients who have had only one infarct.

TREATMENT

For anticoagulant therapy there is no routine; but there is a method with clear-cut requirements. Success of the method depends, first, on the readiness and competence of the physician to apply it and, second, on the proper selection of the patient. Lack of experience and lack of immediate and reliable laboratory facilities are a definite contraindication which nevertheless can and should be overcome in many cases. Decision as to whether anticoagulants are indicated may be a perplexing one. In some communities and hospitals the majority of physicians, at least the more voluble ones, may so outspokenly oppose anticoagulant therapy in certain circumstances that the attending physician, unless strong in his own conviction, may be constrained to forego use of it. On the other hand (in a situation more frequently stressed) he may be urged toward this therapy by other physicians, by the patient or his relatives or (it is said) by the rather naive fear of being charged with negligence. In either situation he should consult, as he does in other clinical dilemmas, with a colleague also experienced in anticoagulant therapy.

The selection of the patient must not be based on any rough routine criteria, but rather on his specific need and, for long-term treatment, on his willingness and ability to cooperate. At times the indications and the contraindications may be of almost equal weight. Bay and co-workers[3] reported such an instance: A patient who had had several thrombotic coronary occlusions and intercurrently three massive hemorrhages from peptic ulcer, insisted on being given dicoumarin during recurrent thrombosis because he feared the danger of thrombosis more than that of hemorrage. It was decided to administer the drug as the lesser risk. Fortunately the need for such decisions is rare. In an acute case, if no consultant is at hand the attending physician's decision on the use of anticoagulant drugs is unassailable. If the danger of hemorrhage cannot be assessed for lack of laboratory service, or if it seems too great in the circumstances, a frank opinion can be given without fear of reprisal. Long-term anticoagulant therapy is the more demanding. The liaison between physician and patient becomes of paramount importance. Such therapy is not feasible in private practice unless a dedicated secretary and nurse are available, and they must have a bent toward amateur sleuthing in locating wayward patients. It is unwise unless the patient accepts equal responsibility in treatment.

†References 1, 2, 10, 14, 21, 26.

The third consideration—given a competent physician with adequate facilities, given a clinical situation that justifies this therapy—the third consideration is the willingness and ability of the patient to cooperate. to come in for his blood tests, to report any significant experience, to follow the prescribed dosage and precautions and. above all, to keep in touch with the physician's office. Failure in this regard can nullify the benefit of treatment. The patient who at first seems cooperative may later fail in these requirements: and if he does, the physician had best gradually diminish dosage and then completely discontinue the treatment.

These, then, are the requirements for therapy. Are they enough? Will they protect the patient—and the physician—from the disquieting experience of sudden severe hemorrhage? My answer, and that of other physicians experienced with anticoagulant therapy, is yes, within the bounds of reasonable risk. First of all, bleeding is almost never spontaneous. As experience with hemophiliacs, and patients with a total loss of fibrinogen demonstrates, a person with virtually incoagulable blood does not bleed unless he incurs a vascular lesion.[20] Security, then, is in direct proportion to the thoroughness with which the physician seeks and rules out the causes of hemorrhage. Obviously it is impossible to detect, much less to evaluate, every potentially hemorrhagic lesion in the body. As the patient's prothrombin level is reduced, the risk of hemorrhage from such lesions increases. The next consideration, then, is to proportion the risk of hemorrhage to the risk of coronary thrombosis. No arbitrary prothrombin level can always protect against these opposing dangers. In acute myocardial infarction the danger of both cardiac thrombosis and cardiac hemorrhage is higher than in the chronic stage. In the latter, experience indicates that a fairly moderate prothrombin reduction gives good protection against thromboembolism without undue risk of hemorrhage.

The Committee on Anticoagulants believes that to receive the full benefits of anticoagulant therapy, the prothrombin content of the patient's blood should be kept, at all times, at a level indicated by at least 25 seconds for clotting (a value of 23 per cent or less). There is, however, the committee said, a definite but lesser therapeutic effect with a prothrombin time as short as 20 seconds (a value of 40 per cent). "A little anticoagulant protection," according to the committee, "is definitely better than none. In cases where excessive hemorrhage or other medical risk precludes the use of dicoumarin in the usual doses. or maintenance of the usual prothrombin levels, consideration should be given to the use of minimal doses such as would maintain the patient at about 20 seconds prothrombin time." Thus, even with a known cause of potential bleeding, a patient with severe myocardial infarction should not automatically be denied antithrombotic protection. On the other hand, a patient without a bleeding lesion need not be kept at a low prothrombin reduction for long-term treatment. In my experience, a prothrombin level of 40 per cent gives good protection against thrombosis, diminishes the risk of bleeding and permits an interval of several weeks between tests once a stable level has been determined. Until better means are available, then, anticoagulant drug therapy is here to stay. The problems ahead are to sharpen the criteria for patient selection, to improve the techniques in management, and to train more physicians in the method. It is the duty of medical schools now to give students a sound understanding of anticoagulant therapy and to present the areas of agreement and disagreement with an avoidance of bias. Equally, practicing physicians have a duty to become skilled in the technique and to be prepared to use it with confidence.

1930 Wilshire Boulevard, Los Angeles 57.

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Nonverbal Treatment of Neurosis

Techniques for General Practice

CHARLES T. BATTEN, *M.D.*, Los Angeles

• **"Psychosomatic medicine" does not demand that the general practitioner function as a psychiatrist; rather, it is a psychiatric orientation that can increase the effectiveness of purely medical treatment for such conditions as neuroses. The general practitioner to whom the patient turns may achieve permanent results with nonverbal techniques where formal psychotherapy would be impracticable or unacceptable.**

The first aim is to relieve pressure so that the patient can regain his mental balance and thereby his self-confidence. Arts, hobbies, sports, and the like can be prescribed rather specifically according to the patient's personality and needs. Nutrition can be improved simply at first by prescribing needed additions to diet rather than imposing restrictions. Vitamin deficiency may by itself be the cause of neurosis or more serious mental disease, whereas psychic stress by itself may create a need for additional vitamin intake. Hormone therapy may be extremely helpful but must be based on clear indication and limited to specific purposes.

Since lack of sleep and rest quickly impairs mental function, it is important for neurotic persons to learn relaxation as a necessity for sleep. Sedatives may be used in a crisis but should be abandoned as soon as possible.

With all drugs there are problems of excess and habituation. The least, the mildest, the shortest dosage is the ideal.

The initial steps of psychotherapy are available to any physician: Establishing rapport, noting how complaints are stated, encouraging ventilation, winning confidence rather than immediate results.

HOWEVER SINCERELY the general practitioner may acknowledge the concept of psychosomatic medicine and the inadequacy of purely physical treatment for disease, he cannot be expected to function as a part-time psychiatrist in addition to his other duties. What is he to do, though, about mild neuroses that are not serious enough to require psychiatric referral or even consultation, but for which sympathetic listening and common-sense advice are not effective? Is he to be content with placebos and topical treatment while mutual discouragement overcomes him and his patient?

This problem cannot be solved by insisting that the general practitioner is the counterpart of the old family physician. The social and economic conditions which were the basis of that close relationship cannot be reconstructed at will and therefore the comparison has at best a sentimental value. But he is the physician who has been consulted, and he can offer help which might not be accepted as readily from a psychiatrist.

Fortunately, a number of techniques have been evolved which may be effectively applied in such borderline cases. These "nonverbal techniques," as they are here termed, may substitute temporarily or permanently for the primarily verbal method of the psychiatrist. Some of them are ancient, some have developed in the same period as modern psychiatry; but all have been overshadowed until recently by the psychoanalytic method and some have almost fallen into disrepute. Now the tide has turned. Nonverbal techniques have assumed a much more important place in the psychiatrist's management of the neuroses, and the general practitioner as well can use them safely.

A twofold change has taken place with regard to what was formerly known as "physical methods" in psychiatry. Chemotherapy and substitutional therapy have been added to the old techniques like insulin and electric shock, lobotomy and leukotomy. These newer methods do not require hospitalization, can easily be combined with any kind of topical treatment, and are particularly indicated in neurotic disturbances; formerly held in lower esteem as mechanistic and merely symptomatic, they are now accorded full status. Meanwhile, better understanding has been gained regarding the role of the patient in working out his own problems and thereby acquiring a working degree of mental health. This process in the patient has assumed increasingly greater importance,[60] and anything which might help it can now be regarded as contributing to the final result. "The actual therapeutic potential is to be found and elicited in the patient, not applied by the psychotherapist."[51] Measures formerly used only to quiet the patient or to keep him occupied (occupational therapy) are now prescribed with a different aim—to help him over a crisis, this furthering his own efforts toward integration: "The patient,"

Associate Professor of Psychiatry, College of Medical Evangelists, Los Angeles.

Submitted August 2, 1958.

Taylor[48] explains, "is guided either directly or indirectly to realize how much he can do for himself rather than being made to feel how much the therapist is doing for him." Prescribed activity can become "the affirmative manifestation of an otherwise maladjusted nature." Sedation is seen in the same light. The physician's function, says Alexander,[2] is to remove obstacles and thus "create conditions in which the regenerative powers can best act . . . Once an obstacle is removed, the rest of the therapeutic task can be entrusted to the ego. War experiences have shown that in many traumatic neuroses simple sedation may suffice. This allays anxiety that temporarily interfered with the ego's integrative faculty. One is inclined to assume that in procedures like narcosynthesis the major therapeutic effect is the relief of anxiety . . . which temporarily hampered the ego's integrative capacity." Thus sedation is employed with a psychotherapeutic intent. The same applies to all nonverbal techniques in the treatment of the neuroses: Each might be prescribed for merely temporizing or supportive purposes, but by the psychotherapeutic intent they become important means of psychosomatic management available to the general practitioner.

Recreation

Nonverbal techniques of therapy were first applied in the treatment the child, who in "therapeutic play . . . may discharge his feelings without fear of being censured or punished. Such a secure emotional discharge serves to quickly reduce the child's anxiety, enabling him to move safely on to therapeutic experiences."[23] The adult equivalent of children's play—leisure activity—may be used in the management of the neurotic patient, both to amuse him and to promote his readjustment through "the psychodynamics of the highly motivated play situation."[9] The overriding consideration must be to propose constructive use of leisure hours, weekends and vacations, which for poorly organized persons may be emotionally upsetting and initiate regressive behavior.[28]

To this end, the physician himself must be familiar with the wide range of therapeutic and supportive measures. To mention a few: Bibliotherapy has been described as a means of psychotherapy through reading. Patients with some insight into their problems may profit from semi-popular books dealing with mental health,[13,16] but novels, poems or plays likewise may divert the patient and at the same time introduce new ideas and suggest purposeful goals. Music[25] and graphic arts, too, may awaken the patient's creative resources. A group setting is frequently preferable to single instruction or work, and the emphasis should be not on technical proficiency but on releasing suppressed emotions and unexpended energy, and on opening up new fields of interest. It is precisely for this reason that, for a professional artist whose real or neurotic problems arise from his work, art therapy may even be detrimental. For the same reason, less pretentious art forms—Moreno's psychodrama,[59] folk dancing, handicraft and the like—may be more beneficial than the fine arts with their professional orientation. Whatever the hobby, it should be selected on the basis of the patient's life setting, traits and complaint. For instance, it would certainly be wrong to recommend stamp collecting for a person of compulsive tendencies. On the other hand, chess, although a silent and lonely game affording only a minimum of interpersonal relationship, might be for some patients a means of working out deep-seated problems.[27]

Nutrition

More conventional supportive measures, such as are used in many purely medical situations, may be applied to the neurotic patient with the same psychotherapeutic emphasis. The difference not only lies in a changed physician-patient relationship, but extends to follow-up and duration of the prescribed regimen. In treating a medical disorder by diet or by vitamin or hormone supplementation, it is not necessary to prolong the follow-up much beyond the subsidence of acute signs and symptoms; but in the psychotherapeutic situation these improvements must be presented as a new way of life that must be pursued regularly for sustained effect.

The main difficulty with diet is not to determine the best regimen but to select one acceptable to the patient. It may be best to begin with only a few needed additions to his habitual diet. In the minds of many people diet has become a bugaboo, an additional source of frustration, a punitive device denying one of the few reliable remaining means of gratification.[1,33] The strategic approach is to be satisfied initially with slight but effective adjustments in the patient's nutritional pattern. Once confidence is established he will more readily accept further changes until a regimen is worked out on the underlying principle well formulated by Sargant and Slater: Sufficient quantities of a well-balanced diet rather than large amounts of an ill-balanced intake.[41] The transition to a fully adequate diet thus becomes part of an overall learning process.

Vitamin supplementation should be seriously considered for any psychosomatic or neurotic complaint; it is well known that the classical deficiency diseases often are accompanied by mental symptoms.[42] Pellagra, for example, leads in many cases to overt neurasthenia, but many neurasthenic symptoms may occur as the only evidence of vitamin B_1 deficiency, as also in the prepellagrous stages of B_2

deficiency—insomnia, anorexia, palpitation, headache and irritability. The night blindness of vitamin A deficiency often occurs on a hysterical basis. The clinical picture in other vitamin deficiencies is less clearly delineated, but in general when one vitamin is lacking the supply of all others can be presumed to be correspondingly low.

Physicians are at present in the skeptical stage of their experience with vitamins, but better understanding of nutritional factors[21] and more refined methods of experimentation and observation[15] have made it possible to demonstrate convincingly the usefulness of vitamin supplementation in the management of the neuroses. It is recognized, first, that the vitamin content of the ordinary diet is too unreliable to support the stress of psychosomatic disease, and second, that supplementation of one vitamin may even accentuate rather than relieve symptoms. Usually, continuous supplementation is necessary for a long time before vitamin metabolic balance is restored and normal tissue demands consistently met. Like diet, vitamin supplementation should become part of the patient's way of life, to be continued almost indefinitely. In general, any multiple-vitamin preparation, preferably including minerals and other nutrients, may be prescribed in doses sufficient for established minimum requirements. Such therapy has by itself dissipated pronounced neurotic symptoms,[50] and in combination with drug therapy has been found highly effective in a clinical setting comparable to a private office.[12]

Hormone Therapy

Hormone therapy in psychiatry, Sargant and Slater[43] concede, "is rather the hope of the future than the practical measure of today." It should be restricted to recognized indications in demonstrable deficiencies and never abused as a cure-all. Desiccated thyroid, in doses of one or two grains a day, counteracts mild depresion. Confusion, lethargy and inability to concentrate may be the result of myxedema[5] and disappear on administration of thyroid; but it must be remembered that prolonged intake of the hormone can lead to thyroid atrophy. Estrogen, possibly combined with progesterone or testosterone, may be tried in menopausal symptoms as well as in premenstrual tension. In some women, though, estrogens aggravate depression and should not be given over a long period without a thorough endocrinologic evaluation. Most healthy women can sustain the stress of hormone fluctuation, and prolonged or severe symptoms indicate more basic problems.

Rest and Activity

One of the most critical deficiencies is lack of rest and of sleep, in which "the activity of the self-system can be abandoned for a certain part of the twenty-four hours."[47] Lacking this relief, a person's ability to handle unwelcome, disapproved motivations, anxieties, etc., deteriorates rapidly with consequent impairment of mental health.[46] According to Pavlov[32] "sleep is inhibition spreading over all the hemispheres"; this quite generally explains the restorative power of rest, sedation and sleep.[57] These are not the same as the sleeplike conditions of anesthesia and hypnosis[14] and in all probability sleep induced by hypnotic drugs is in this latter category, overpowering somatic tension rather than releasing it.

It is by now well understood that wakefulness is due to anxiety or, more generally, to overactive ego defenses. The aim is to by-pass these defenses in order to alleviate the causative anxiety or other neurotic tendency through the curative effect of healthy sleep. Physiologically, sleep is a state of functional de-afferentation[18]; in particular the feedback from muscular impulses must have come to rest before the patient can follow the diurnal rhythm from wakefulness to sleep. This may be achieved by relaxation of the body in a tepid bath (as the ancient Greeks recognized[26]), by a better planning of the day's activities to permit rest periods, and by a slowing down of pace toward bedtime. One person may be quieted by an evening walk, another by reading, others by prayer[49]; but in any case, "sleep must be wooed and is not to be captured in one swoop."[31] As Kleitman reminds us, sleep is at least partly a learned process.[19] Medication is only used to bridge the first critical period of insomnia or broken sleep; it should be of the mildest effective kind and withdrawn as soon as practicable. Myerson[30] made the excellent suggestion that it should be taken an hour or two before retiring so that by the time the patient gets to bed he is really ready for sleep. Toilet preparations should be completed shortly after the evening meal; thus the patient, instead of relying on drugs, is learning habits conducive to a good night's rest.

Necessary as ample sleep and rest are for the neurotic patient, the management should never become overprotective. Whitehorn[52] cautioned that stress has become a "bad word"" and that we fail to recognize how much mental illness is attributable not to stress but to the lack of it or, in his own words, to "the personal experience of uselessness and a collapse of meaningful effort." A truly productive plan of reeducation should lead to "the organization of life toward energetic effort in stressful situations rather than the avoidance of stress." For some persons, work (for example, gardening, carpentering, mechanics) may be as health-giving as rest is to others. It is interplay between rest and effort that makes for stability through adjustment.

Drug Therapy

The ancient sedatives and stimulants—alcohol, opium, hashish, tobacco, caffeine—have been vastly supplemented in recent years, but the underlying problems of excess and habituation remain the same. We must ask ourselves whether more than temporary relief of neurotic symptoms is ever achieved by these methods, and whether even this result is not too high a price to pay in view of the dangers. Even the tranquilizers have recently been listed as habit-forming drugs by the World Health Organization.[56] The theme of this presentation applies to drugs also: They may serve to help the patient over a crisis from which he can proceed on his own powers. Always, the drug must be (1) selected with regard to the history and symptoms; (2) the mildest agent in the lowest effective dosage; (3) followed up and withdrawn at the first sign of ill effect or when no longer required.

Tranquilizers tend to reduce anxiety, nervous and muscular tension and acuity of awareness; they are mildly depressant, but not as powerful in their action as central depressants like the bromides or barbitals.[22] The best current opinion seems to be that chlorpromazine and reserpine are very useful in the treatment of patients in hospitals, but they are much less promising for ambulatory neurotic subjects. Anyway, their effect is not clearly predictable. For example, chlorpromazine seems to be beneficial in most patients with acute anxiety neuroses, while in others anxiety and related symptoms are decidedly increased.[39] The drug seems to do best in neurosis of the obsessive-compulsive type; in depressive states it is ineffective and may even aggravate the complaint.[24] Reserpine usually relieves neurotic symptoms within a matter of hours, but it is likely to break down protective defenses and release underlying drives in a display of emotions which may be disturbing to the patient and difficult for the physician to handle.[20] Most important, both chlorpromazine and reserpine as well as meprobamate (Equanil,® Miltown®) are beset by a considerable number of untoward side-effects, among which may be mentioned leukopenia, impairment of liver function, urinary retention, purpura, diarrhea and hypotension.[58] In this context the results of a carefully controlled British study are very enlightening.[35] Various tranquilizers ("Nutinal," chlorpromazine, meprobamate, and "Sedaltine") were tested against amobarbital (Amytal) and a placebo; while there was no difference in the potency of the four tranquilizers, only the barbiturate proved significantly more effective than the placebo. Some observers may go as far as to conclude that "in general the tranquilizers appear to have little or no advantage over placebos in the treatment of neurotic outpatients."[10] At any rate, although amobarbital and the other barbiturates are not without hazards of their own, physicians are at least aware of the risks involved and familiar with indications and dosage, whereas even the widely used tranquilizers have not yet been sufficiently tested for anyone to be sure of all their effects.

Stimulants like benzedrine, dextro-amphetamine and others are helpful in the management of slight depressions but cannot control the more severe forms. The effect, furthermore, is short-lived. Sargant and Slater[40] suggested that benzedrine may afford the depressed patient a day or two of comparative normality and that this experience can be used to impress upon him that his illness is not as hopeless as he thought. When anxiety is the predominant symptom, though, stimulants will only aggravate the condition. Myerson[30] observed that a combination of amphetamine derivatives with one of the barbiturates helps to reestablish an approximately normal emotional state, thus bringing the latent forces of the organism for cure or remission into play. Ferguson[12] employed a stimulant (methylphenidate hydrochloride) to counteract the effect of psychosedatives and neurosedatives as well as the patient's initial underactivity, and thereby was able to produce a state of "active tranquility."

The earlier expectations that the ataractic drugs, in addition to exerting a sedative effect, will also increase ego strength do not seem to have been fulfilled as yet.[6] The old barbiturates and bromides, far from being merely "chemical restraints," still remain very useful tools in the management of neurotic crises. Placebos, on the other hand, hardly deserve a place in the treatment of psychosomatic disease. It has been recognized that every drug in addition to its pharmacological effect also exerts a psychological and sociological influence, the latter being due to the "milieu effect."[30] Furthermore, the action of placebos is not entirely imaginary, for measurable physiologic changes at the end organs have been demonstrated.[55] Yet it would seem that in the management of the neuroses the use of placebos introduces an element of deceit which clashes with a basic concept of psychotherapy, that is, the establishment of a relationship of confidence between physician and patient in order to promote healthy reactions in the disturbed subject.

DISCUSSION

The foregoing discussion of nonverbal techniques, although far from complete, may suggest the wide variety of modalities available, their applicability depending on the patient's personality, his resources and the preference of the physician. There is a personal style in nonverbal psychotherapy, as in more formal methods, and the physician can best use the means he understands and relies on. Indeed, all

psychotherapy has important elemental and nonverbal aspects,[3] relating back to the early, nonverbal events with which psychopathology is so much concerned. "The patient has to gain communicative experience in the nonverbal mode before he can engage in verbal exchange,"[37] and communication "motivated by love in the widest sense of the word including the religious, and guided by understanding . . . is capable of producing profound psychic and physiologic effects."[4] This element, moreover, may prove to be the basic ingredient in the management of neuroses, for which the rate of success appears to be similar whatever modalities have been employed. Bowman and Rose,[7] reviewing 11 reports by different investigators over a 20-year period, found the range of improvement from 55 to 87 per cent with an average of 67 per cent. Miles and coworkers[29] arrived at a mean average of 73 per cent, while Schjelderup,[44] in a smaller series, obtained lasting improvement in better than 87 per cent with psychoanalytic treatment alone. Eysenck's tabulation,[11] although widely criticized, suggests at least worthwhile improvement from treatment by custodial institutions and general practitioners (72 per cent) compared with success of psychoanalysis (66 per cent) and eclectic treatment (64 per cent).

As Braceland[8] observed, "We now may regard it as axiomatic that no one approach to psychiatric disorder can claim a monopoly upon wisdom, understanding or therapeutic efficiency." Redlich[36] noted that most psychodynamic therapy is applied to patients of the upper and middle classes, while psychoneurotic persons of lower class are most likely to receive only supportive and manipulative psychotherapy. He ascribed the difference not only to economic reasons but also to difficulties in communication between the middle-class psychiatrist and the lower-class patient. The general practitioner, more accustomed to dealing with patients of all classes, may be better able to bridge the gap both verbally and nonverbally.

Certain psychiatric techniques may be helpful in guiding the physician to a selection of therapeutic methods. The history, first, should be taken in an unhurried manner. The patient who is always under some strain is thus given a chance to relax. This does not mean that the permissive approach is necessarily in all instances the best; sometimes firmness is much more effective, but the physician's basic attitude should be open and truly compassionate, never moralistic or prejudging. What is required is to establish rapport. Only if the patient feels that he can trust the physician will he open up and talk freely, thereby giving the therapist an opportunity to collect the facts and size up the situation. Rapport has been described as a necessary nonspecific factor in any psychotherapeutic procedure,[61] and the same holds true with regard to ventilation: The patient is encouraged to tell his story, thereby unburdening himself of his troubles. Such an emotional release is sometimes all that is required, but in other instances it will at least indicate his readiness to accept constructive measures and suggestions. However, a word of caution may be in order—"not to remove the lid from the boiling cauldron of the patient's emotions unless it can be got back again."[53]

What makes of routine history-taking a preliminary psychotherapeutic interview is the added attention given to every seemingly unimportant detail. It is important not only *what* symptom the patient complains about, but *how* he does it. Simple questions as to age, family status, occupation, general health and former diseases often bring forth answers which reveal the degree of adjustment to essential life situations. From all these data together with the patient's general appearance and manner the physician may form an impression of his personality and the seriousness of his condition—most important, his accessibility and his insight into his problems. On these findings the physician will decide how best to manage the case or whether a psychiatric consultation might be indicated.

Not only at the time of the first consultation but throughout the treatment by nonverbal means, the physician can find occasion for verbal contact with the patient. In fact, one of the greatest advantages of these nonverbal methods is that it becomes possible to weave psychotherapy unobtrusively into other consciously acceptable treatment methods, thereby enlarging the range of communication. Many a patient who cannot be reached by the verbal approach will be helped by such nonspecific therapy.

As in every other kind of psychotherapy, the immediate aim is relief of symptoms, and only time can tell what further benefits will accrue to the patient. Results will differ, of course. In some cases the subject will again be able to function on his former level, whatever that level might have been; in others there will slowly emerge a greater ability to cope with life's problems, a change for the better which the subject enjoys without fully understanding what has happened; or again, improved surface adjustment might lead to greater insight, more conscious re-learning, and resolution of deep-seated conflicts. Psychiatry has come to be much more realistic in its therapeutic goals and not to expect a complete remaking of every patient.[17] Thus, whatever the response may be, the general physician can make an important contribution by helping the patient to use his own recuperative powers for a fresh start toward better mental health.

The list of references is available from the author.

1720 New Jersey Street, Los Angeles 33.

Crushing Injury of the Hand

Prevention of Ischemic Contracture

CARL E. NEMETHI, *M.D.*, Los Angeles

• **Crushing injury of the hand usually causes "explosive" damage. Subsequent swelling of the palmar structures further impairs venous outflow, and hemorrhage into structural spaces increases the pressure. The arterial system and the large dorsal veins, however, are seldom obstructed and provide adequate circulation unless hampered by improper bandaging. A bandage that compresses the dorsal veins causes back-pressure, which increases the swelling further and brings about ischemia. Swelling and pain cause the patient to restrict exercise of the injured hand, which permits contractures to develop.**

The author has averted this sequence in more than 100 cases by preserving integrity of veins during debridement, arresting hemorrhage, bandaging the hand with compression dressings in functional flexion, and reducing swelling with hyaluronidase. In these cases, on removal of bandages in 24 hours, swelling was reduced and continued to diminish. All patients exercised the hand at this time without discomfort and only a few required aspirin for pain.

VOLUMES HAVE been devoted to reconstruction of the hand crippled by contractures after injury, but little has been written about methods of immediate treatment to prevent or lessen impairment of function during the healing process. This presentation describes a method which in the author's experience has greatly reduced the severe effects of intrinsic ischemic contracture, a major cause of deformity and disability in crushing injuries of the hand.

Bunnell[1] believed that ischemic contracture is due to vascular impairment, often caused by tight encasement of the hand in plaster or in constricting bandages. He distinguished this condition from Volkman's ischemic contracture of the arm but recognized that the two might coexist. Both, he postulated, are due to the same cause—not arterial obstruction, which causes gangrene at the fingertips, but local congestion or impairment of venous return.[2] He distinguished this ischemic contracture of the intrinsic muscles from the typical claw-hand resulting from median and ulnar nerve paralysis. He stressed the importance of recognizing vasomotor disturbances early and of keeping the hand active and working; early flexion of the proximal finger joints and dorsiflexion of the wrist, he mentioned, maintain muscle balance of the hand in functional position.[3]

VASCULAR SUPPLY OF THE HAND

On the back of the hand a rich, large network of veins lies directly over the unyielding extensor tendons and fascias covering the metacarpal bones. but the loose skin allows free flow under most conditions. Dense networks drain the fingers, then unite as a dorsal plexus and converge at the elbow as two large veins, the cephalic and the basilic. Smaller trunks proceed proximally between these two.

The palm of the hand allows no such freedom of circulation. It is a basin, bounded by the bony metacarpals, the intrinsic muscles and the thenar and hypothenar structures. The superficial palmar veins, small in caliber, sparse and irregularly distributed, lie between the skin and the palmar aponeurosis. The deep veins follow the digital arteries, the common digital arteries and the superficial and deep palmar arches to the ulnar and radial arteries. The common digital vessels and the nerves form neurovascular bundles coursing between the flexor tendons and lying beneath the deep palmar fascia. As on the back of the hand, all the vessels converge at the wrist.

PATHOLOGY OF VENOUS OBSTRUCTION

Despite the freedom of the dorsal veins of the hand to expand, trauma and the resulting unnatural pressures can obstruct them within seconds.

Bunnell said: "Venous obstruction promptly brings about engorgement with blood. Soon capillary resistance is overcome at 60 mm. of mercury, and at 100 mm. petechiae and extravasation of blood commences, accompanied by edema. In a closed space even arterial inflow is reduced, regulated only by the amount of outflow."

Brooks found that venous occlusion causes hemorrhage, edema and degeneration of muscle fibers, resulting in acute inflammation progressing to fibrous contracture. He described more inflammation than degeneration but did not test it in a closed space. He concluded that venous obstruction is the primary cause of the condition.

Presented before the section on Orthopedics at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

In the operating room the author has observed that within a very short time after crushing trauma the hand begins to swell; it may double in thickness in 10 to 20 minutes. Crushing causes an "exploding" kind of injury characterized by ragged and irregular skin lacerations from which extrude muscle bellies, torn veins, fascia and areolar tissue. There may be little or no bleeding. Soft tissues appear edematous. On deep exploration, rents in the palmar fascia are seen, sometimes welling free blood from hematomas of the palmar clefts. Flexor tendons may appear intact but on closer inspection contusion may be seen. Areolar tissues may be torn loose from the neurovascular bundles. Peripheral nerves, because of their resistant composition, almost always escape division, but if they are compressed against firm structures such as bones, the resulting hyperemia and edema may cause partial or total anesthesia for a period of weeks to months.

Crushing injuries affect the palmar circulation of the hand more seriously than the dorsal circulation. Seldom are the arteries severely damaged; they usually pulsate fully and regularly, although moderate transient arterial spasm sometimes occurs. On the back of the hand, where contusion is often severe even though accompanied by little or no laceration, the veins are usually thick-walled and movable enough to roll away from the impact and avoid serious injury. The dorsal skin being elastic enough to permit heavy swelling, the severance of even a small dorsal vein leads to extensive subcutaneous hematoma, but even despite edema the dorsal veins usually remain patent. In the palm, however, superficial veins are torn because of their vulnerable position, and the deeper veins because they are thinner and more friable. Injured veins early become obstructed or thrombosed. As the structures bounding the palmar basin swell with edema, the pressure increases to a point at which the deep venous flow is partially or fully occluded but arterial function is not restricted.

In this situation the dorsal superficial veins become vitally important as the only remaining channel for venous return. The slightest dorsal pressure exerted by constricting bandages or casts at the wrist dangerously slows or completely halts the already overtaxed flow, establishing the conditions for venous ischemia—unobstructed arterial pressure, severe venous insufficiency, and blockage of available venous outlets. In such circumstances the hand becomes thick, boggy, purplish, moist and cyanotic, in contrast to the dry gangrene of arterial occlusion. The results—fibrosis and contracture—are known to all.

The multitude of permanently crippled hands suggests that basic principles of treatment, if understood, are not being thoughtfully applied. Potential ischemia of the crushed hand must be averted in primary treatment; procrastination in the belief that secondary reconstruction will suffice should be condemned. Prophylactic, specific medical and surgical therapy immediately following the injury is imperative whenever possible. In the author's experience, these are the conditions that assure good salvage:

Proper debridement; control of hemorrhage; maintenance of adequate venous and lymphatic flow; arrest and reduction of edema; relatively painless motion.

In debridement, functioning veins must be respected. Too often, in the removal of foreign material and devitalized tissue, veins are cut and tied to clear the operative field with little regard for their importance. Rather they must be meticulously teased free and gently retracted while the operation is carried deeper. They can best be dissected without tourniquet occlusion, since if they are filled with coursing blood they are easier to identify and isolate than if they are collapsed. Rarely are ties indicated. Severed, bleeding vessels need be clamped only a few minutes until adequate thrombosis has taken place, when the forceps can safely be removed. After identification and retraction of the venous plexus the tourniquet can be reapplied.

All bleeding points must be sought, identified and clamped, the hemostat including only the end of the cut vessel. Even the smallest of bleeding vessels can flood a hollow space and increase interpalmar pressure. Large masses of tissue indiscriminately clamped and tied become necrotic and add to edema and to accumulations of waste products in an already overtaxed area. Ties should be kept to a minimum and should be made with 6-0 plain catgut or finer. Actually only the larger arteries need be ligated. Residual hemorrhage anywhere in the hand, especially in closed spaces, can be disastrous. No reliance is to be placed on the use of pressure dressings or closing sutures to control active bleeding.

Adequate venous and lymphatic flow is maintained by preservation of the venous plexus as previously described. Proper "compression" bandages are vital for good circulation. Much has been said and written about this subject but improper bandaging is still one of the major causes of local venous ischemia. Bandages placed with maximum pressure across the wrist obstruct the venous and lymphatic outflow. Casts and improperly secured plaster splints have the same effect. Placing the arm in a sling compromises the circulation and in many patients adds deltoid atrophy.

After operation, open wounds should be closed by interrupted stainless steel No. 38 wire sutures. The edematous tissues should be approximated loosely, for tight closure increases intrapalmar pressure and

retards circulation. Wounds are covered by Furacin® or Vaseline® gauze. Compression dressings are formed by the use of fluffed Kerlix® gauze, two to three yards as indicated, and placed to fill the palm like a large ball so that the fingers and wrist assume the position of function about it. Another fluff is placed on the dorsum of the hand. These fluffs must not overlap the wrist. Wrapping with stockinette bandage cut on the bias is started over the metacarpophalangeal joints fairly snugly so that the fluffs are compressed about one-half. The pressure is decreased as wrapping progresses to the wrist so that at this point an examiner's two fingers can be slipped loosely between the last turn of bandage and the volar or dorsal wrist skin. A volar splint then can be placed and fixed to the arm and hand by a loose stockinette bandage cut on the bias, but it must be ascertained that this does not alter the pressure of the underlying bandage. The arm is not slung. The patient is instructed to carry his hand at upper chest level and to exercise his shoulder, elbow and fingers immediately.

The measures already discussed help to arrest and to reduce edema. Fairly recently a new agent that can be used for this purpose, hyaluronidase, was introduced. Literature concerning hyaluronidase is meager, especially on its use in trauma. Gartland and MacAusland suggested that the enzyme may disperse hematoma from traumatic soft tissue hemorrhage and thus prevent impending Volkman's contracture or possible myositis ossificans if 1,500 turbidity reducing units are injected into multiple sites and pressure applied with an elastic bandage.[4] It is generally conceded that the enzyme promotes diffusion and consequent absorption of fluids in the tissues. No evidence was found that it might cause localized infection to spread, provided it was not injected into the infected area. The author has infiltrated hyaluronidase directly into the debrided soft tissues about the site of reduced and pinned fractures, nerve repairs, muscle and fascial suture, with no complications or delay in healing. The amounts used were 150 units in fingers, 200 to 300 in thumbs and 600 to 800 in multiple areas of debrided viable tissue of the hand before the application of the pressure bandage.

The foregoing routine has been followed successfully in more than 100 cases. The author regularly removes bandages within 24 hours and inspects the hands. In all cases there has been a definite diminution of edema and swelling, the reduction continuing during the ensuing 5 to 14 days, until the hand appears essentially normal.

Early motion of the hand promotes maximum recovery; restriction of motion tends to cause crippling. If moving the hand causes much pain, the patient of course moves it as little as possible; and pain cannot be adequately controlled, in the author's experience, by narcotics or barbiturates. Rather, the measures previously outlined have proven to be effective insurance against pain of motion. Most patients were made comfortable with aspirin. Some did not require it. The first postoperative day none needed narcotics, few needed aspirin to make them comfortable, and 95 per cent reported only mild discomfort. All exercised the fingers and thumb freely without undue discomfort. Most returned to work two or three days after operation, on jobs requiring only the uninjured hand.

CASE REPORTS

Case 1. A 19-year-old paper jogger caught his left hand between steel and rubber rollers, which crushed the fingers and hand before he could be extricated. The wound was highly contaminated with bits of paper and other foreign material and almost immediately swelled grossly (Figure 1). It was of the explosive type caused by compression and extended from the dorsum of the thenar eminence across the palm to the hypothenar eminence (Figure 2). Almost all the superficial palmar veins were severed but there was little gross hemorrhage. Soft tissues, portions of muscle bellies of the hypothenars, fat and connective tissue extruded from the wound. The deep palmar fascia was likewise irregularly and intermittently exploded, and the flexor tendons of all four fingers were exposed and contused, though intact. Their accompanying neurovascular bundles were intact but the surrounding areolar tissues were torn and partially stripped away. Some of the common digital veins appeared thrombosed and insufficient, but the arteries pulsated normally and fully. Petechial hemorrhages were apparent everywhere, with small hemorrhages in the hollow spaces. Roentgenograms showed no fractures.

After debridement, hemostasis and closure of dead spaces, the wound was closed loosely with stainless-steel wire sutures (Figure 3) and 800 units of hyaluronidase was infiltrated directly through the wound. The fingers were flexed about a fluff of Kerlix and a volar plaster splint was applied over Kerlix and bandage to hold fingers and thumb in a position of flexion (Figure 4). This was retained with a layer of stockinette (Figure 5). Antitetanus serum and Combiotic®* (2 cc.) were injected.

The operation had been done under local nerve block, and the patient was then sent home with a supply of aspirin for moderate pain and Empirin Compound 3® to be taken in case of severe pain. Twenty-four hours later edema had regressed and the palm of the hand was again concave. The patient had taken only 1.2 gm. of aspirin for pain and had been able to sleep. He reported only a slight degree of pain on examination. The postoperative course was uneventful and since a one-hand job was avail-

*A combination of crystalline procaine penicillin G, buffered crystalline potassium penicillin G and dihydrostreptomycin.



Figure 1.—Swelling and contamination in hand crushed between rollers of paper-jogging machine (Case 1).



Figure 2. — Same hand as at left, showing wound of explosive type extending from dorsum of thenar eminence across the palm to the hypothenar eminence.



Figure 3.—Same as above, after debridement, hemostasis, closure of dead spaces and loose closure with stainless steel wire.

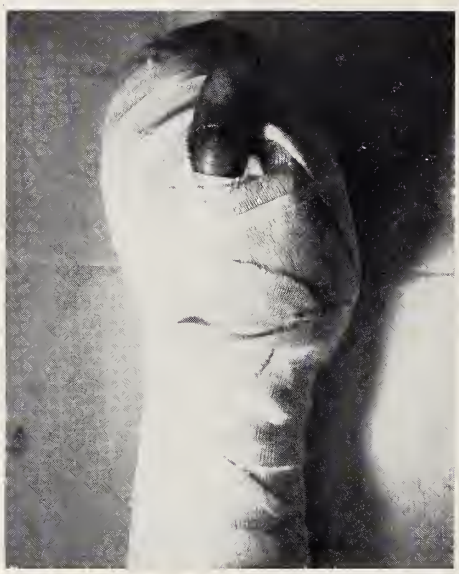


Figure 4 (Case 1). —Hand flexed over a fluff of Kerlix and bandaged to hold fingers and thumb in flexion.



Figure 5. — Stockinette holding hand in position shown in Figure 4. Note that it is not tight at wrist, lest circulation be impaired.



Figure 6 (Case 1).—Injured hand 24 hours after operation, with edema diminished and palm concave.



Figure 7 (Case 2).—Bursting laceration principally at base of thumb caused when hand was crushed in a press.



Figure 8 (Case 2).—Ten days after injury, fingers and thumb could be almost fully extended.



Figure 9 (Case 2).—Flexion of fingers and thumb of injured hand ten days after injury. Adduction and abduction of thumb were somewhat limited.



Figure 10 (Case 3).—Hand crushed and almost amputated when caught under falling bundle of steel sheets.



Figure 11 (Case 3).—The thumb and little finger, in which digital arteries and dorsal veins still functioned were salvaged.



Figure 12 (Case 3).—A useful pinching function was developed by the patient six months after operation.

able he returned to work. Three weeks later he resumed his regular job. Permanent disability was minimal.

Case 2. A 35-year-old man caught his right hand in a press, suffering a bursting laceration principally at the base of the thumb (Figure 7). Treatment previously outlined was followed. A large hematoma was evacuated through a stab wound. Twenty-four hours later the edema had regressed so that the dorsal skin was loose and wrinkled with the hand in full, painless extension. Ten days later the fingers could be almost fully extended and flexed (Figures 8 and 9). The thumb could be flexed and extended well, but adduction and abduction were more limited. Meantime the patient had returned to a one-hand job with loss of only a day from work. Permanent disability was minimal and in six weeks the patient went back to his regular job.

Case 3. The left hand of a 32-year-old Negro was crushed and almost amputated when a half-ton of steel sheets fell on it (Figure 10). Multiple open comminuted fractures included the extrusion of two carpals through the wrist. Tissues of the index, middle and ring fingers as well as the central palmar area were obviously devitalized and were excised, but a spark of life remained in the thumb and little finger, in which the digital arteries and dorsal veins still functioned. Fractures of these digits were reduced and stabilized with intramedullary Kirschner wires, so that they could be formed into a pinching mechanism. Hyaluronidase was infiltrated into the little finger (150 units), the thumb (300 units) and the proximal palm and wrist (800 units). Closure. medication and compression bandaging were done as previously described.

The fractures and soft-tissue injuries healed per primum, and so did a full-thickness skin graft applied six weeks after operation. In six months the patient had developed a useful pinching function (Figures 11 and 12).

Case 4. An 85-year-old woman's hand was caught in the wringer of a washing machine, which avulsed the skin and subcutaneous tissues like a glove from the wrist to the finger bases. Both the dorsal venous plexus and the deep palmar vessels remained substantially intact. There was little damage to the deep palmar fascia and the extensor tendons. Treated as previously described, the patient was discharged from hospital the day after injury with little edema and very little pain, moving her fingers freely. Three days after operation the skin was healing and the patient was using the hand in sweeping, etc. Six months later she could almost fully extend and flex the fingers.

5592 Santa Fe Avenue, Los Angeles 58.

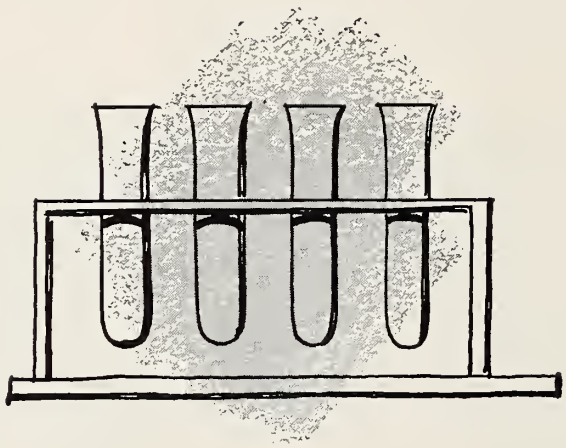
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Congenital Heart Disease

Comments Regarding Incidence and Natural History

FORREST H. ADAMS, *M.D.*, Los Angeles

• **The incidence of congenital heart disease is approximately 1 per cent of all live births. Approximately 60 per cent of patients who die of congenital heart disease do so at less than two years of age. Very few patients with such lesions live beyond 45 years at the very most. In about 70 per cent of patients who are born with cardiac anomalies, the lesions are either of kinds that are already being operated upon successfully or for which operations are now being attempted and often are helpful.**

IMPROVEMENTS IN THE diagnosis and treatment of patients with congenital heart disease have come swiftly. Even investigators working full time in the field find it difficult to keep up with the frequent advances. Oddly, however, little is known about prevention and until very recently not much was known about the incidence or the natural history of the various forms of congenital heart disease. Even now this information is fragmentary and hardly permits more than a few general statements.

Estimates of the frequency of congenital heart disease which are generally quoted have been based either upon clinical signs elicited during physical examination of older children, or upon autopsy data, a source which makes hospital deaths from all causes the only basis for comparisons. Richards and co-workers,[10] at Babies Hospital, Columbia University, studied the frequency of congenital heart disease in an unselected newborn population produced from 5,964 consecutive pregnancies. Table 1 shows the incidence of congenital heart disease for the 6,053 infants, grouped according to weight at birth. Fifty of them were born with congenital heart disease, an incidence of 0.83 per cent. This proportion may be slightly low since the living infants were observed for only one year; and it was pointed out that in some cases heart disease probably was "overlooked because of failure to develop symptoms or signs before the end of the follow-up." Richards said that it is reasonable to suppose that atrial septal defects may comprise the major portion of the lesions unrecognized under one year of age.

TABLE 1.—*Incidence of Congenital Heart Disease (CHD) in 6,053 Newborns (Richards[10])*

Weight of Newborn	Total	With CHD	
		No.	Per Cent
500 gm. or less	314	1	0.3
500 to 2,500 gm.	597	18	3.0
2,500 or more	5,142	31	0.6
Total	6,053	50	0.8
Surviving 1 month	5,530	38	0.6

TABLE 2.—*Survival of Patients with Congenital Heart Disease (Abbott[1])*

Condition	No. of Cases	Age		
		Maximum	Minimum	Mean
Atrial defect:				
Above	10	64 yr.	6 mo.	34 yr.
Below	18	46 yr.	8 mo.	19 yr.
Patent ductus arteriosus	92	66 yr.	2 wk.	24 yr.
Ventricular defect	50	49 yr.	Fetus	14 yr.
Coarctation of aorta:				
Adult	70	92 yr.	3 yr.	33 yr.
Infantile	9	9 mo.	8 hr.	2 mo.
Pulmonary stenosis	16	57 yr.	4 yr.	18 yr.
Tetralogy of Fallot	85	60 yr.	11 days	12 yr.

With this information as a base regarding the incidence, what is the natural history of patients with congenital heart disease? When do they become ill, and when do they die? The classic work in this regard is that of Abbott.[1] For no practical reason at the time, she set about collecting data on cases in which autopsy was done. In an excellent monograph she summarized the material she had gathered on the first 1,000 cases. Survival data on the most common congenital cardiac anomalies (as abstracted from her monograph) are given in Table 2.

It is known from at least two sources[6,9] that 60 per cent to 80 per cent of patients dying with congenital heart disease do so during the first two years of life. Recently, Boesen[4] of Denmark collected data on 1,145 infants and children under four years of age who died of congenital heart disease in all of Scandinavia. The original material has been rearranged by me into three groups: Those in which the lesions were operable, those in which operation was a possibility, and those in which operation cannot be done at present. As shown in Table 3, about a third of the patients had lesions of a kind for which corrective or palliative operation is of proved value.

From the Department of Pediatrics, University of California, Los Angeles.

Submitted July 25, 1958.

TABLE 3.—*Cause of Death Under 4 Years of Age (1,145 Cases);* Operable Lesions*

Diagnosis	Cases	Age at Death Less Than			
		30 Days	150 Days	1 Year	4 Years
Coarctation of aorta	83	40	70	80	3
Patent ductus arteriosus	70	24	54	65	5
Tetralogy of Fallot	48	15	24	36	12
Atrial defect (secundum)	35	10	26	31	4
Atrial defect (primum)	13	1	7	11	2
Aortic stenosis, valvular	30	14	25	29	1
Tricuspid stenosis	30	11	21	28	2
Atrial defect + patent ductus arteriosus	28	19	26	27	1
Pulmonary stenosis	19	9	11	16	3
Total	356	143	264	323	33

*Adapted from Boesen and Vendel: VIII International Pediatric Congress.

TABLE 4.—*Cause of Death Under 4 Years of Age (1,145 Cases);* Operation Possible*

Diagnosis	Cases	Age at Death Less Than			
		30 Days	150 Days	1 Year	4 Years
Ventricular defect	148	51	107	142	6
Ventricular defect + patent ductus arteriosus	65	34	54	63	2
Ventricular defect + atrial septal defect	15	1	10	14	1
Ventricular defect + patent ductus arteriosus + atrial septal defect	12	5	10	12	
Pulmonary stenosis + atrial septal defect/ventricular septal defect/patent ductus arteriosus	33	13	24	29	4
Atrioventricular communis	33	6	22	33	
Complete transposition	167	78	138	163	4
Single ventricle	90	52	80	88	2
Total	563	240	445	544	19

*Adapted from Boesen and Vendel: VIII International Pediatric Congress.

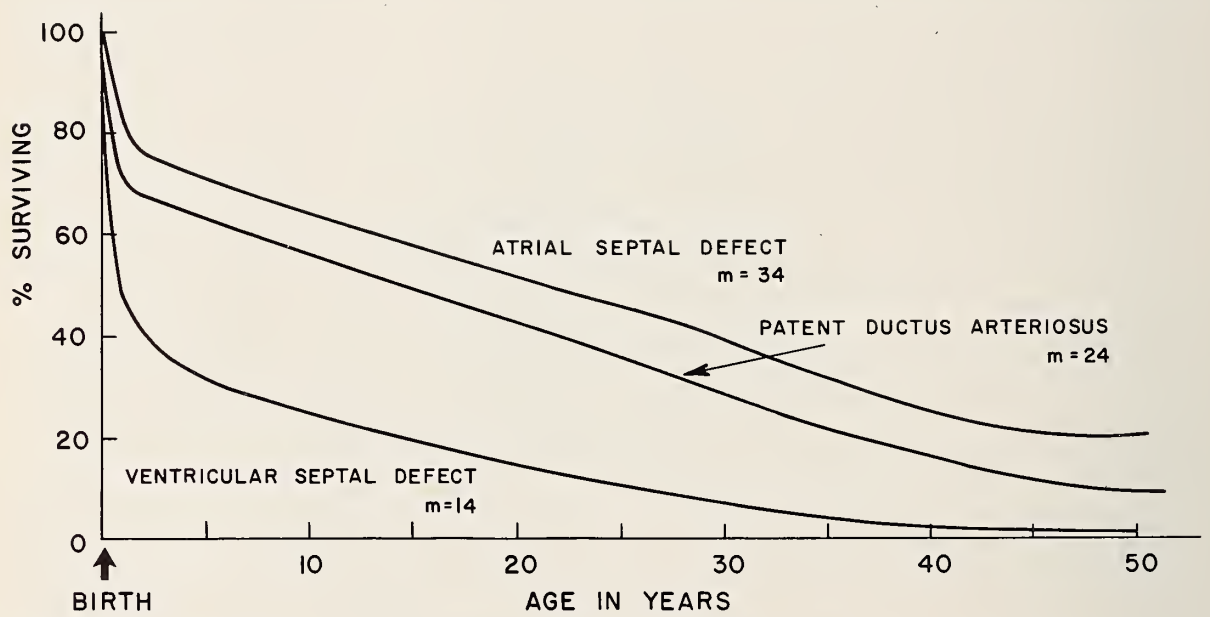


Chart 1.—Theoretical survival curves for patients with left to right shunt (mean age (m) obtained from Abbott[1]).

About half of the 1,145 patients were in the possibly operable group—that is, they had lesions for which operation is now being attempted and is either curative or palliative in many instances.

In order to visualize the natural history of some of these congenital heart lesions, I have made two diagrams which are purely theoretical but make use of the best information currently available. Chart 1 shows the theoretical survival curves for patients with left to right shunts and Chart 2 shows the curves for patients with stenotic lesions.

Congenital heart disease is not only significant in the cause of death in infancy but it is also a significant cause of morbidity. Keith[7] recently reviewed his experience in the diagnosis and treatment of heart failure in the pediatric age group. He reported on 304 patients, of whom 90 per cent were under one year of age. Chart 3 shows the causes of heart

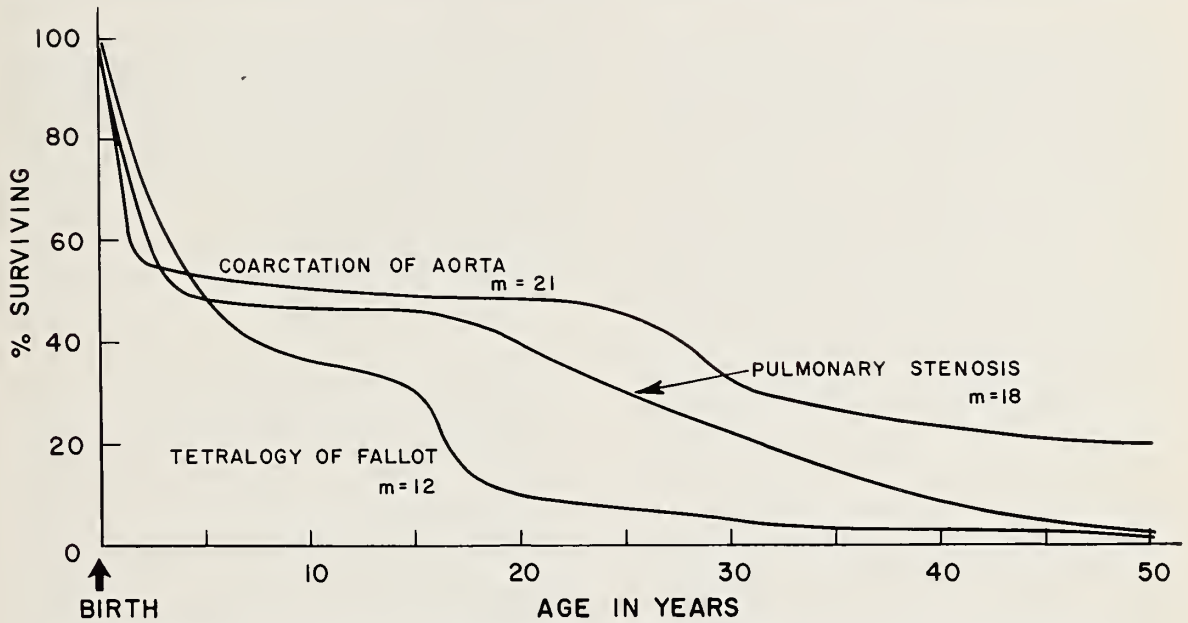


Chart 2.—Theoretical survival curve for patients with stenosis (mean age (m) obtained from Abbott[1]).

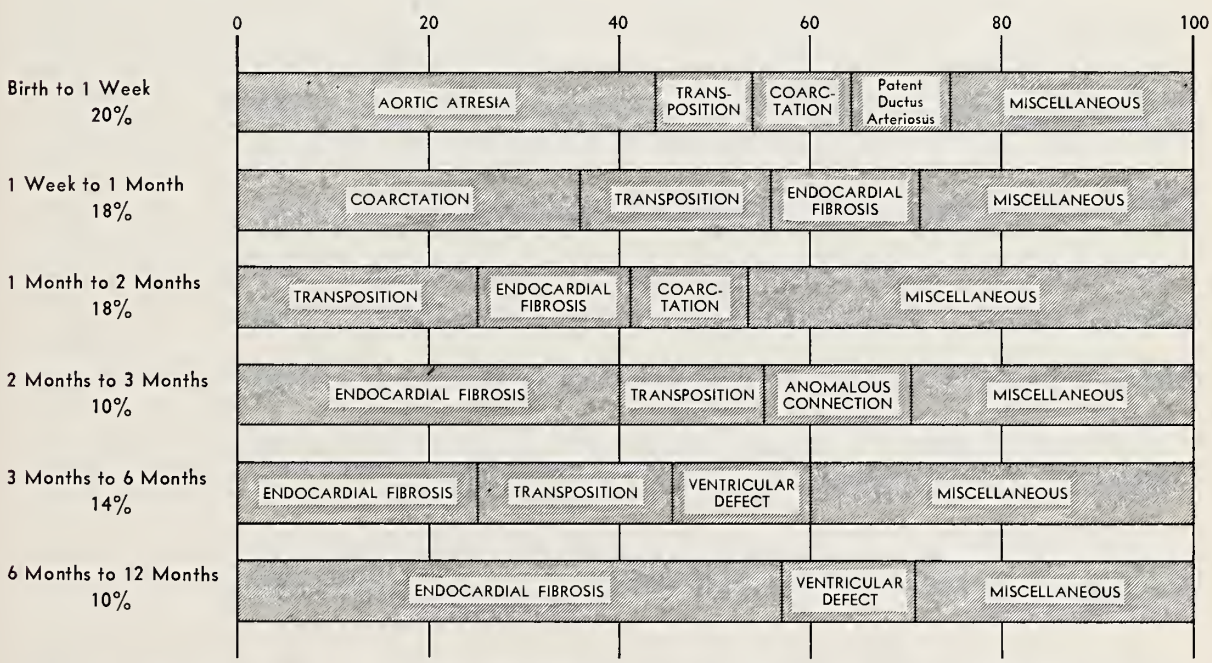


Chart 3.—Cause of heart failure correlated with age (304 cases). (Adapted from Keith: Pediatrics, 18:491, 1956.)

TABLE 5.—*Cause of Death Under 4 Years of Age (1,145 Cases);* No Operation Available at Present*

Diagnosis	Cases	Age at Death Less Than			
		30 Days	150 Days	1 Year	4 Years
Hypoplasia of left ventricle	63	43	60	63	
Truncus communis	48	33	42	47	1
Hypoplasia of aorta	42	21	36	39	3
Diverse	73	22	47	68	5
Total	226	119	185	217	9

*Adapted from Boesen and Vendel: VIII International Pediatric Congress.

failure in patients under one year of age. In addition to the high incidence of transposition of the great vessels and coarctation of the aorta as a cause of heart failure, the high incidence of endocardial fibroelastosis, particularly after the first month of life, was noteworthy.

It is becoming increasingly evident that in the instance of at least two congenital heart lesions, patent ductus arteriosus and interventricular septal defect, there is a far-advanced clinical situation in which surgical treatment by present methods is probably contraindicated. In the severe form of "reverse" patent ductus arteriosus, in which the major portion of the flow through the ductus arteriosus is from pulmonary artery to aorta, the operative mortality is approximately 100 per cent, for reasons not well understood.[8] In contrast, in cases in which the major portion or all of the flow through the ductus arteriosus is from aorta to pulmonary artery, the operative mortality is below 1 per cent.[11] Recently evidence was presented to suggest that patients with a partial "reverse" ductus arteriosus operated upon at an early age can survive the operation even though there is some reverse flow.[3] The main problem is early recognition and definitive treatment.

Eisenmenger complex has long been recognized as a form of interventricular septal defect. The main aberration that distinguishes it from simple interventricular septal defect is a systolic pressure in the right ventricle which exceeds that in the left ventricle, causing right-to-left interventricular shunt.[5] Most of the patients with nearly balanced pressures in the right and left ventricles have extensive changes in the intima and media of the pulmonary arterial tree.[5] Evidence recently presented[2] showed that the operative mortality in this group of patients also approximates 100 per cent, whereas it is much lower for patients who do not have the elevated right ventricular pressures.[2] Clear-cut evidence is not available to show that right ventricular and pulmonary hypertensions progress with time. However, severe forms of the disease with pulmonary hypertension are known to exist in the infancy and early childhood period. It is entirely possible that the pathological changes present in the lungs of younger patients with the disease will not be so extensive or irreversible at this earlier age.

University of California at Los Angeles School of Medicine, Los Angeles 24.

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Criteria for Mitral Valvotomy

Roentgen Evidence in Pulmonary Hypertension

RICHARD S. COSBY, M.D., and GEORGE JACOBSON, M.D., Los Angeles

• **Although catheterization is the most accurate and sometimes the only adequate method of measuring pulmonary hypertension as an indication for mitral valvotomy in rheumatic heart disease, it is so costly and complex that simpler methods are desirable. Clinical evidence of pulmonary hypertension is least accurate; electrocardiography is confirmatory in half of all cases. Roentgenologic findings are more helpful; moderate or severe enlargement in the pulmonary arteries has been associated in 92 per cent of cases with resting systolic pressure of 50 to 90 mm. of mercury in the pulmonary artery. In cases in which there is little or no enlargement, hypertension may still be present and demonstrable only by catheterization. Other roentgen signs noted as helpful are abrupt narrowing of the large branches of the pulmonary artery in the middle and lower lobes, and the septal lines of Kerley.**

MAXIMUM IMPROVEMENT following mitral valvotomy has been obtained among those patients in whom pulmonary arterial pressure was highest before operation and fell the most afterward. Cournand and Ferrer[4] separated patients with classical mitral diastolic murmur into three groups. In the first group, those with mitral stenosis but normal pulmonary vascular pressure and insignificant degrees of mitral "block," valvotomy is useless. In the second group, where mitral stenosis is complicated by active carditis, with reduction of cardiac output and only a slight increase in pulmonary vascular pressure, operation is contraindicated. Only in the third group, those with true mitral block and varying degrees of pulmonary hypertension, is the operation desirable.

Although cardiac catheterization may adequately distinguish among these groups, its cost and complexity are deterrent; but since pulmonary hypertension is so important a criterion for mitral valvotomy, it is important to assess it by other means—clinical, electrocardiographic or roentgenologic.

Purely auscultatory criteria of pulmonary hypertension are not sufficiently reliable; as Fowler[6] and others have stated, the signs of this condition cannot be clinically measured with accuracy. Fowler specified that the following signs are of little value for the purpose: (1) The loudness of the apical diastolic murmur, (2) the prominence of the second sound in the pulmonary area, (3) the presence or absence of a right ventricular "lift" along the left sternal border, and (4) the presence of an "A" wave in the venous pulse.

The senior author[2] observed better correlation with pulmonary hypertension in the electrocardiogram, which yields a characteristic pattern of right ventricular hypertrophy for half the patients with increased right ventricular and pulmonary artery pressure. In eight of eleven patients in Fowler's series who had mean pressure of more than 50 mm. of mercury, there was electrocardiographic evidence of right ventricular hypertrophy, and in the other three there was suggestion of this condition. Among those with pressure between 30 and 49 mm., hypertrophy was evident in five, suggested in one; in four there was no such evidence of abnormality. Ordinarily, commissurotomy would have been considered indicated for all these patients. Rarely was right ventricular hypertrophy electrocardiographically evident in a patient with mean pressure below 30 mm.

The purpose of this presentation is to describe the roentgenographic findings in pulmonary hypertension. Jacobson and co-workers[8] observed that moderate or severe enlargement in the pulmonary arteries was associated in 92 per cent of the cases with moderate to severe increase of resting systolic pressure in the artery—50 to 90 mm. of mercury and higher. However, normal size or borderline enlargement in the pulmonary arterial system does not rule out mild or even moderate pulmonary arterial hypertension, which exceeded 40 mm. in 47 per cent of such cases (see Figure 1). These results agree with those of Steiner[10] and of Doyle and Goodwin.[3] Cardiac catheterization for the sole purpose of determining pulmonary arterial pressure is probably unnecessary when enlargement in the pulmonary artery is moderate or marked. When there is little or no enlargement, however, pulmonary hypertension can be excluded only by cardiac catheterization.

Doyle and Goodwin[3] also emphasized the abrupt narrowing of the large branches of the pulmonary

From the Department of Medicine and the Department of Radiology, University of Southern California School of Medicine, and the Los Angeles County General Hospital.

Presented before the Section on Internal Medicine at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

arteries, a condition they observed both at necropsy and in postmortem angiograms. This abrupt narrowing was present, they noted, in the arteries to the middle and lower lobes, as would be expected with a general increase in peripheral resistance, but there was no such narrowing in the arteries of the upper lobes. They advanced the opinion that the arterial constriction, both reflex and organic, represents an

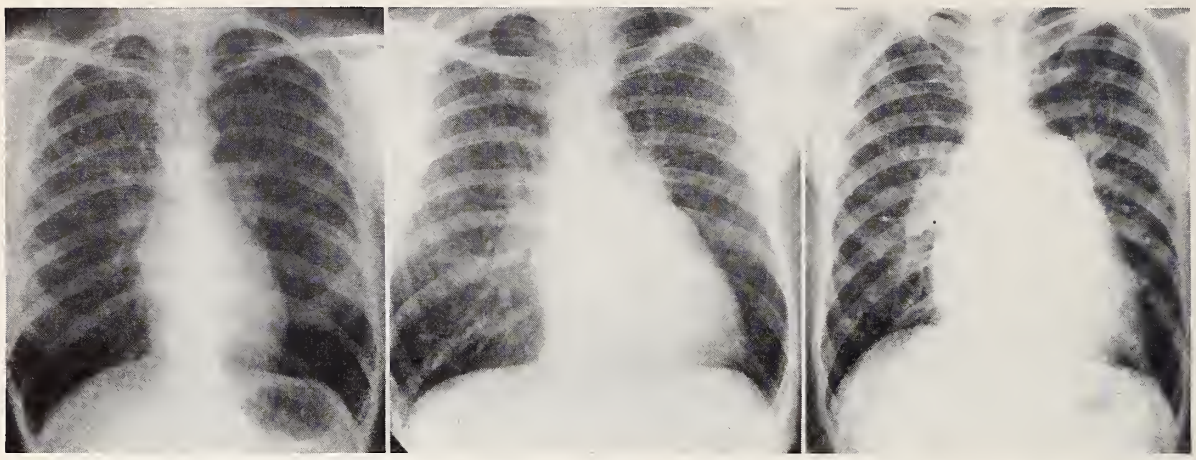


Figure 1.—The size of the pulmonary artery and its relation to pulmonary hypertension. *Left:* Normal pulmonary artery with normal major branches in a case of mitral stenosis with mild pulmonary hypertension (40 mm. of mercury). *Center:* Moderately enlarged pulmonary artery with slightly enlarged major branches in a case of mitral stenosis with moderate pulmonary hypertension (78 mm.) and mild hemosiderosis. *Right:* Greatly enlarged pulmonary artery and moderate enlargement of major branches in a case of mitral stenosis with severe pulmonary hypertension (200 mm.). The multiple calcifications in both lungs are presumably related to previous rheumatic activity but their presence cannot be correlated with pulmonary hypertension.



Figure 2.—X-ray films in a case of long-standing mitral stenosis. No septal lines present in the film at left. In the picture at right, three years later, after development of mild pulmonary hypertension and recurrent congestive failure, numerous septal lines are visible.



Figure 3.—X-ray evidence of extensive hemosiderosis with normal pulmonary artery pressure (proved at operation).

attempt to "protect" the capillary circulation, and that it does not occur in the upper lobes because pulmonary capillary pressure is lower there. They associated this distribution of arterial pressure with the distribution of pulmonary edema in mitral stenosis, which is rare in the upper lobes and greatest in the lower.

The septal or B lines first described by Kerley[9] in 1955 are frequently associated with pulmonary hypertension. These are fine, hairlike, horizontal lines found in both costophrenic angles, more often on the right (Figure 2). They most likely represent distended lymphatics within the interlobular septa and, according to Fleischner and Reiner,[5] may be augmented by hemosiderin deposits. They are found most frequently in patients with mitral block simply because the conditions under which they occur are most often present in mitral valve disease. They are occasionally present in left-sided congestive heart failure, but not in primary cor pulmonale.

Attempts have been made by various investigators to relate the presence of septal lines to increased pulmonary artery pressure. Grainger and Hearn,[7] for example, found that septal lines were present in 14 of 18 patients with diastolic pulmonary artery pressure over 40 mm. of mercury. They further noted that after commissurotomy 90 per cent of the patients with septal lines had improvement, but only 61 per cent of patients without septal lines. Bruwer and co-workers[1] noted septal lines in 30 per cent of 152 patients with mitral stenosis, and in 50 per cent of those who had high pulmonary artery pressure. Although the investigators cited above have attempted physiologic correlations in terms of pulmonary artery pressure, the basic relationship is to pulmonary venous pressure.

Pulmonary hemosiderosis, like septal lines, is most often associated with rheumatic mitral stenosis, and is apparently the result of old hemorrhage at sites of anastomosis between bronchial and pulmonary circulation. Much less common than septal lines, and present in only 8 to 10 per cent of all patients with mitral stenosis, it does not appear to have any specific correlation with mitral block, and is found with all degrees of pulmonary artery pressure (Figures 1 and 3).

1200 North State Street, Los Angeles 33 (Jacobson).

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Workmen's Compensation Act

Some Aspects of Interest to California Physicians

WILLIAM M. WHELAN, FRANCIS J. COX, M.D., and HOWARD HASSARD, San Francisco

This article was prepared by Mr. William M. Whelan, Director of Special Services, California Medical Association, under the supervision of Dr. Francis J. Cox, Chairman of the Medical Services Commission of the Association, and Mr. Howard Hassard, the Association's Legal Counsel. It is intended as a brief synopsis of the California Workmen's Compensation Law as it applies to the physician in private practice. It is not an exhaustive treatment of the subject. A physician who desires to acquaint himself in detail with California industrial practice should consult the article entitled "The Physician's Role in Workmen's Compensation," California Medicine, 82:352-362, April, 1955. Inquiries regarding industrial medicine should be addressed to Mr. William M. Whelan, California Medical Association, 450 Sutter St., San Francisco 8.

The California Workmen's Compensation Act was designed to place upon industry the responsibility for treatment and compensation arising from occupational injuries and diseases. Under it, an employer may be a self-insurer or may purchase necessary coverage from an insurance carrier.

The two broad areas of payment made are: (a) Those for medical care to restore the injured employee to his job as quickly as possible, and (b) those cash payments made to the injured employee to replace, in part at least, wages lost while convalescing, or for permanent disability.

During the five policy years 1952-1956, the following incurred losses have been reported in California:

Policy Year	Medical	Indemnity
1952	$ 31,908,676	$ 52,536,772
1953	32,139,841	49,805,739
1954	34,415,465	50,774,849
1955	38,397,186	56,224,907
1956	42,623,506	62,441,190
	$179,484.674	$271,783,457

The Workmen's Compensation Act is administered by the Industrial Accident Commission. The commission is composed of seven commissioners, one of them designated as chairman, who are appointed by the Governor with the approval of the Senate for terms of four years. The commission is divided into two panels of three members each, representing (1) the general public, (2) labor, and (3) management. One panel is located in San Francisco and the other in Los Angeles. The commission employs sixty-seven "referees" who hear disputed cases referred to the commission. During the past fiscal year, the commission rendered decisions involving 33,858 cases. The majority of these cases did not involve the compensability of the claim but, rather, the determination of the amount of the award.

The commission has adopted an official minimum medical fee schedule, which has been published and is available for each member of the California Medical Association. As a matter of convenience, a copy of the printed medical forms used for reporting treatment is to be found at the back of the printed fee schedule.

An employee with an industrial injury is entitled to receive all medical, surgical and hospital treatment essential to the cure or relief of the effects of the injury. This includes medicines, nursing care, transportation expense incident to treatment and examinations, orthopedic aids and other items. An industrial injury is one which, (1) occurs in the course of, and (2) arises out of a given employment. When injured, the employee must notify his employer.

By law, the employer and his insurance carrier have full responsibility for providing required medical treatment and have the right to select the physician and hospital to be used. Although the Industrial Accident Commission administers the Workmen's Compensation Act, the actual control of medical treatment is left to the employer and the insurance carrier. As a matter of practice, the

carriers maintain a register of physicians who have agreed to handle industrial cases.

In an emergency, an employee may get treatment from his own physician. Most employers and insurance carriers will pay that physician for his services at the published minimum rate. Before a physician can look to the insurance carrier for payment, he should assure himself that the injury is an industrial one and should have the name of the employer. Usually, the employee will present to the physician a written notice naming the company for whom he works and the insurance carrier. If the employee does not bring a written authorization stating the name of the carrier, the physician should notify the employer directly. Otherwise, the employer may have no knowledge of the injury and may not submit an employer's report. Carriers will not pay medical bills or compensation until they have received both the employer's and the physician's reports.

The physician who attends an injured employee must file, within five days after the injury, a complete report with the Division of Labor Statistics and Research, Post Office Box 965, San Francisco 1, California. The report must be made on Standard Form 5021. As a practical matter, this form is usually prepared in duplicate and a copy is sent to the insurance carrier. For uniformity, physicians making reports are required to use the standard terminology set forth in the booklet *Evaluation of Industrial Disability* prepared by the California Medical Association and the Industrial Accident Commission.

If continuing treatment is necessary, Supplemental Reports are required. These are a necessary part of the process by which an employee is paid weekly compensation in appropriate cases. In complicated and prolonged cases, Progress Reports are needed, and in certain cases Consultant Reports of examination are submitted. When a case is closed, a Final Report is submitted.

If a physician feels that the fee provided in the schedule is not adequate in a given instance, he should submit supporting data to the insurance carrier to explain his charge. He should note such matters as necessary time spent and should describe procedures and treatment in language that will be understood by nonmedical persons in an insurance claims office.

The commission does have power to arbitrate disputes between a physician and an insurance carrier relative to the amount of the physician's fee. It can assume jurisdiction only after a physician files an application for adjustment of claim. Filing such a claim must be done in a somewhat formal manner and it leads to a hearing. The commission's decisions in such cases are based on general principles of reasonableness. As a practical matter, this procedure would be used in unusual cases.

When an employee files a claim with the IAC, written medical reports, if they are necessary, will be filed by the employee or his attorney as part of the claim. X-ray films should be filed with the commission only upon specific orders (subpoena) to do so. (One of the commission rules provides that if a willful suppression of a medical report is shown to exist, *it shall be presumed* that the findings contained therein would be *adverse* if produced.) Copies of such reports must be served on all parties to the dispute. All medical reports made *during the pendency* of such a claim must also be filed with the commission and a copy served on all parties. When x-ray films are ordered to be produced they must be made available for inspection at a convenient time and place to the party making the request. Hospital records are subject to the same rules. The filing of these reports is the responsibility of the employee or the employer, not the physician.

In most instances, a physician will not be called to testify; his written report is used. But if he *is* called, provision ordinarily will be made for his testimony to be given at a convenient time. In case a postponement is necessary, fair consideration will be given to the emergency appointments of a physician in arranging for a specific time for continuance.

California Labor Code Section 131, provides that a physician subpoenaed to testify before this commission is entitled to the same witness fee and mileage as he is entitled to when he is subpoenaed to appear before the civil courts as a witness. Most insurance companies and employers recognize that a physician should be compensated and they will make provision for doing so.

The commission may refer disputed medical questions arising in compensation proceedings to its own medical bureau or to an independent medical examiner chosen by the commission from an official list of physicians. The cost of the independent medical examination shall be borne by the party requesting it unless the commission orders otherwise.

The physicians listed on the IAC register of independent medical examiners are chosen from among the physicians in the various communities in sufficient number to meet the commission's needs. They are generally specialists.

A medical examiner appointed by the commission *when called for oral examination beyond his written report* shall be paid a witness fee by the party requiring attendance. The fee shall be a minimum of $50 for the first two hours or less of attendance at the hearing, and $18 additional for each hour or fraction thereof beyond the first two.

The Periodic Health Appraisal of Employees

WILLIAM C. MUMLER, M.D., and JOHN L. BENTON, M.D., Los Angeles

• **Periodic health appraisals for employees in business and industry are desirable and effective. Male executives over the age of 40 constitute the group most in need of them. Examinations of the kind done for private patients, including careful history-taking and thorough physical observation, are the most reliable, economical and productive.**

Undesirable factors to be guarded against in these examinations are unnecessary hospitalization, excessive laboratory and radiologic procedures and absence of rapport between examiner and examinee.

Ideally, the results of the examination should be made known to the employee only—not to the employer except with the stated permission of the employee.

INDUSTRY AND MANAGEMENT have become increasingly aware of the frequency of premature death and disability in the 40 to 60-year-age group, especially among their male executives.* A number of factors have contributed to the current interest: Articles in the lay press have emphasized the importance of preventive care, and President Eisenhower's illnesses and periodic health appraisals have done much to focus attention on the importance of preventive medicine.[11] Apparently, stressful industrial situations and the increased tempo of life contribute to the hazards of this age group[4]—the years in which executives are most valuable to their companies. For this reason, several large corporations are pioneering in the field of periodic health examinations for executives and other key personnel.[7,9,10] The program of periodic health appraisals is gaining such impetus that unless members of the medical profession (1) crystallize their thinking in this field, (2) formulate sound principles for the health appraisal programs, and (3) make concrete recommendations concerning these examinations, the entire program may fall into complete disrepute.

Commonly, these examinations are of four types:[6] (1) Evaluation of a person in a hospital; (2) clinic evaluation; (3) examination of the kind given by the home town internist, and (4) evaluation by the medical director of the company.[8] In the past, examination by the company medical director has often been relatively superficial, for one reason because full cooperation of the person examined is frequently hard to secure owing to the implication that results of the examination are to be passed on to the company. Not only are hospital and resort evaluations unnecessarily expensive from the standpoints of time and money, but detailed information obtained in these examinations is not immediately available to the employee's physician when necessary.

Years of experience in this field have taught the authors that the most important element in the establishment and continuance of an effective periodic health examination program is the maintenance of such a program on a voluntary and confidential basis.

We shall discuss here only the kind of examination we believe to be the most rewarding—periodic examination by the home town internist. The great majority of physicians would agree that the medical problems of the seriously ill patient can best be handled by beginning with that kind of examination. It follows, therefore, that the most effective way to approach the problems of the potentially ill but ostensibly well person is through the same kind of examination.

We believe that the periodic health appraisal should be approached in the precise and methodical manner used in the private practice of internal medicine. As in the examinations of other patients, the core of the periodic appraisal is the careful, complete history and a thorough physical examination. On the basis of the history and findings in the physical examination, we can determine which laboratory procedures are essential for thorough appraisal of the particular patient. Certain tests are necessary in every instance if we are to assure ourselves and the person examined that important physiologic processes are within normal limits. These are: (1) A complete blood cell count, with hematocrit; (2) determination of erythrocyte sedimentation rate; (3) complete urinalysis, concentrated to 1.018 if possible; (4) serology; (5) stool examination for parasites and occult blood; (6) x-ray examination of the chest, and (7) an electrocardiogram.[5] Additional laboratory procedures are employed only if specifically indicated by a careful evaluation of the patient's history and findings in the physical examination.

One serious and valid criticism of the periodic health appraisal programs of today is the frequent excessive dependence upon exhaustive laboratory

From the Department of Medicine, University of Southern California School of Medicine, Los Angeles.

*References 1, 2, 7, 8, 9, 10.

and radiologic procedures which make the examination costly and tedious but add little to the efficacy of it.[3] Indeed, they may even detract from the value of the health appraisal, because they divert attention from and tend to obscure central problems. A return must be made to careful history-taking and physical examination followed by indicated laboratory procedures.

A fact to be borne in mind at all times is that these examinations should be entirely voluntary on the part of the employee, and that if it entails anything that is not acceptable to him, employee participation in the program will thereby be decreased. One area of controversy is the routine inclusion of sigmoidoscopic examinations in periodic health appraisals. Although medical literature is replete with reports of discovery of unsuspected lesions in routine sigmoidoscopy, the public is not yet conditioned to accept this measure as part of the periodic examination. Rather than insist on the inclusion of this procedure or any other which might materially disturb participation in the program, we feel that it is wiser to perform special examinations only when indications are clear-cut—just as we do in private practice with our other patients.

If possible, health appraisals of this kind should be carried out in the employee's own community. There is much to be gained in permitting the family physician to perform the examination, provided he is qualified to carry out the kind described, since his knowledge of the patient's health history, daily habits and family problems provides a background or setting otherwise unavailable for the evaluation of current findings. This permits a thorough examination which is economical as to both time and money. The physician-patient relationship already built up between the employee and his physician reassures the employee that the results of the appraisal will remain entirely confidential. If the family physician is not equipped to perform these examinations meticulously, they can be accomplished most effectively by a local physician trained in internal medicine. Using local examiners permits better continuity of medical care should the employee become seriously ill, for the information in the health appraisal is immediately available. Providing the employee with an opportunity to use a physician of his own choice emphasizes the voluntary and confidential nature of the examination and promotes the feeling that the examination is a benefit granted by the employer.

All examinations should be conducted in an orderly manner—with fixed appointments promptly met, for this will impress the physician as well as the employee with the importance of the appraisals. Evaluation of approximately a thousand cases of this type has convinced us that the employee should be dealt with exactly as is a private patient.

Once the examination and any indicated special procedures are completed, we insist that the patient return for a review of our observations and for our recommendations. The return visit following the appraisal has a two-fold purpose: It gives us an opportunity to arrange for further procedures as indicated and to set the date of the next appraisal; and the patient is able to discuss the results of his examination and to air any existing anxieties.

Ideally, no report of any kind should be supplied to the employer. We prefer to evaluate our findings orally with each patient at the time of the return visit. Written reports should be given to the employee or to the family physician only if the employee specifically requests that this be done. If the physician, the employee and the employer are agreed that a report should be supplied the company, this report should be initialed by the employee or, better, given to him for transmittal to the employer.

3875 Wilshire Boulevard, Los Angeles 5 (Mumler).

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California's Alcoholic Rehabilitation Program

A Preliminary Report

ALFRED AUERBACK, M.D., San Francisco

• **Confronted by the most serious alcoholism problem in the United States, California has begun an extensive rehabilitation program in three categories: Treatment and rehabilitation services; study and investigation; education, information and training. Treatment clinics operate in seven cities and it is proposed to help finance further facilities in communities interested in their local alcoholic problem. Grants to medical schools for improved personnel training are also proposed. Basic and clinical research and epidemiologic, sociologic and follow-up studies are in progress. Public education to the problems of alcoholism, stressing that it is an illness requiring treatment, is under way. This multi-faceted approach is expected to supply answers to many of the questions surrounding alcoholism.**

ALCOHOLISM is a chronic behavioral disorder manifested by repeated drinking of alcoholic beverages in excess of the dietary and social uses of the community and to an extent that interferes with the drinker's health or his social or economic functioning.[3] Jellinek has devised a formula whereby the number of "alcoholics with complications"—those who have a diagnosable physical or psychological change due to prolonged excessive drinking—can be estimated from the reported deaths due to cirrhosis of the liver. Using this formula, the number of alcoholics with complications in a given community can be determined; and this number, multiplied by 4, gives the total number of alcoholics, the aggregate of those with and those without complications. Field studies of sizable populations to determine the actual number of alcoholics in several geographic areas coincided to a remarkable degree with the number estimated by using the Jellinek formula.[6] No such studies have been carried out in California.

In 1955, according to the Jellinek Estimation Formula, California had nearly 600,000 alcoholics with and without complications or one in every 14 adults in the state, the highest rate in the nation.[1] This was an increase of 77 per cent in the number of alcoholics in the ten-year period since 1945, a period during which the population of the state was rising only 47 per cent. A study made in 1950 showed that the 13 American cities with the highest rate of alcoholism included six in California, with San Francisco and Sacramento ranking first and second nationally.[4] Alcoholism is the eleventh cause of death in the state. ("Alcoholic deaths" include those deaths reported as due to alcoholism and those due to cirrhosis of the liver attributable to alcoholism as computed by the Jellinek formula). In 1955, 87 per cent of all alcoholic deaths were due to hepatic cirrhosis. For years cirrhosis of the liver has been the fifth cause of death in San Francisco.[2]

Approximately half of all arrests in California are for drunkenness. In 1955, drivers who had been drinking were involved in 17,546 accidents and were responsible for 22 per cent of all automobile accident fatalities. In that year the per capita consumption of absolute alcohol for the population, aged 15 years and over, in California was 2.36 gallons compared with 1.90 gallons nationally. In San Francisco the per capita consumption was 4.57 gallons.

In 1954 the California Legislature established an Alcoholic Rehabilitation Commission to study the problem and to institute corrective measures. In 1957 the commission was abolished and its program transferred to the State Department of Public Health, which organized a Division of Alcoholic Rehabilitation. The division administers the program upon the recommendations of a five-man advisory committee representing the public interest. The author is the medical member of this committee.

The program as it now stands—present activities and plans for the future—may be divided into three broad categories. These are: Treatment and rehabilitation services; study and investigation; education, information and training.

Treatment and Rehabilitation Services

The legislature authorized eight "pilot clinics" which were "to engage in the treatment and rehabilitation of alcoholics." There are now seven such clinics in California providing out-patient treatment for alcoholics—in Sacramento, Stockton, Oakland, San Francisco, San Jose, Los Angeles and San Diego—and a new one, in Long Beach, is proposed. With the exception of the San Francisco clinic, which is financed in large part by the county, they are almost

Presented at the Southern Divisional meeting of the American Psychiatric Association, Miami Beach, Florida, December 1 to 3, 1958.

The author is a member of the Advisory Committee on Alcoholic Rehabilitation, California Department of Public Health.

Submitted December 7, 1958.

entirely state-supported. Some clinics are attached to hospitals, others are in downtown office buildings or in converted houses in residential areas.

Each clinic is headed by a physician, usually a psychiatrist, and has a staff of physicians, psychologists, social workers and nurses. While the Division of Alcoholic Rehabilitation defrays the expenses of the clinic, the local governing body, either the Department of Public Health or Department of Institutions, has a relatively free hand in its operation. The form of treatment rests with the clinic director and may include individual or group therapy, physical rehabilitation, use of drugs, individual or family counseling and vocational assistance. Each clinic keeps detailed records of everyone treated, and the patients will be observed periodically afterward to ascertain the degree of adjustment brought about.

To get adequate data on their effectiveness, it is planned to continue these pilot community clinics for a five-year period, the state paying the cost of operation. In addition to these pilot clinics, it is proposed to offer to supply money on a 50-50 basis to any community that wishes to begin a treatment program—whether in clinic, hospital, "half-way house" or jail farm—or that wishes to provide information centers, counseling services to industry or consultation services to agencies.

Since alcoholics probably seek medical help at some time during their illness, it is proposed to improve the teaching about all aspects of alcoholism in the medical schools in California. Each school will be given a grant of money to establish a treatment clinic for alcoholics. The emphasis will be on the training of medical students, interns, residents and other professional personnel to better their understanding and ability to handle these sick people.

During the past year the Division of Alcoholic Rehabilitation has had two hospital demonstrations that acutely ill alcoholic patients could be treated readily in a general hospital. A corollary study indicated that if the medical, nursing and administrative personnel are given preliminary knowledge about alcoholism, their prejudices and fears abate, which helps the program of treatment go smoothly.

Study and Investigation

The program as it is being carried out embraces basic research, clinical research, sociological studies, follow-up of treated patients and an epidemiologic study. In basic research, studies were made on alcohol metabolism in the body. It was found that alcohol interferes with nutrition in the brain, that it impairs the normal functioning of the pituitary gland and the lower brain stem. The use of tranquilizing drugs combined with alcohol causes greater intoxication than does alcohol alone. The effect of alcoholism on adrenocortical function is under study. Improved methods for the measurement of alcohol in the body have been devised.

In a follow-up study of 700 patients some 12 to 18 months after they were treated a state hospital, a jail farm or a community clinic, it was noted that approximately two-fifths of them appeared to have made a satisfactory adjustment as measured by employment, family relationships, drinking patterns and state of health. The remainder continued to manifest illness by numerous hospital admissions, arrests and patterns of living that brought them into conflict with society. These patients will be observed and interviewed occasionally over a five-year period. The ultimate purpose of these studies is to develop and apply evaluation methods to determine what constitutes good and poor adjustment in alcoholics who have been treated.

Unlike evaluation studies, which are focused on known alcoholics, etiologic studies are focused on the "normal" population to observe the early emergence of problem drinking which may lead to chronic alcoholism. A large number of community leaders were asked to list their criteria of what constitutes an alcoholic. Using these social definitions and criteria, a screening questionnaire was developed which, when applied to any group, permits classification of each member as one of high or of low risk in terms of problem drinking. It is planned to use this screening questionnaire on sizable population groups and to interview persons in both classifications at annual intervals for five years. The hypothesis is that patterns similar to those of known alcoholics will develop in persons in the high risk group. Members of the low risk group will be studied to learn what factors in their backgrounds, personalities and mode of life enable them to cope with alcohol without trouble.

The relationship of hepatic cirrhosis to alcoholism has long been a question. In California, selected death certificates listing cirrhosis are being studied for any evidence of relationship to alcohol. The medical history and pathological slides are being reviewed where possible. Recently it has been found that anatomic and physiologic damage to the liver may be measured in terms of zinc lost from the body fluids. Zinc is a trace metal whose presence is absolutely essential for the functioning of the enzymes which metabolize alcohol. The division is now engaged in a pilot study to validate these findings and then to ascertain their applicability as a simple laboratory test to determine directly the presence of even minor liver damage associated with drinking.

For the past two years a statistical study has been made of death certificates to learn what illnesses alcoholics have at the time of death. To determine possible statistical relationship of various factors, data is also being gathered on the race, sex, occupa-

tion, age and geographical location of the person who died. Mortality tables that are being developed show that deaths due to alcoholism are occurring at younger ages. In 1955 alcoholism was the sixth cause of death for the age group 35 to 54 years. Another aspect of the same study is a scanning of all death certificates for the names of alcoholics who are under observation in this program. When a death certificate is registered for one of these persons, his record is reviewed. From data thus obtained, it will be possible to compute how much shorter the life expectancy is in this group of alcoholics than in the general population.

At an alcoholic research clinic, financed in large part by the Division of Alcoholic Rehabilitation, operating in the department of psychiatry at the U.C.L.A. School of Medicine, the results of treating alcoholics with drugs (including lysergic acid), psychotherapy and placebos are being investigated. Psychological testing indicates that an alcoholic who seeks help at a clinic is similar in personality makeup to the average patient who seeks psychiatric help in an out-patient department, although with more awareness of his rebellion against authority. Other studies, both psychiatric and physiologic, are providing considerable data on the makeup of alcoholics, and on the possibilities of treating them by various means.

Education, Information and Training

The division is engaged in disseminating information on alcohol, on drinking and on alcoholism with a view to encouraging public acceptance of the concept that alcoholism is an illness and that alcoholics are sick people who can be helped. Through workshops, institutes and postgraduate training, professional workers can be educated in the nature, cause and treatment of alcoholism. Physicians, hospital personnel, clergy, police, teachers and social workers would be the groups at whom this training is directed.

COMMENT

From earliest recorded history mankind has been troubled by the problem of alcoholism. The Bible has 71 references to the use of alcoholic beverages. About 2225 B.C. the Babylonian Code of Hammurabi devoted several sections to regulations on the sale of alcoholic beverages to control intemperate use.[5] In 3,000 years of recorded Chinese history, laws for the control of drinking were enacted—and repealed—at least 41 times. Through the centuries, alcoholism has been considered a moral weakness; only lately has it come to be regarded as an illness.

As yet no satisfactory method for the cure of alcoholism has been found. However, no disease in man that affected so many people has ever been controlled by treatment alone. Whether the ancient plague or more recent diseases like malaria, tuberculosis, poliomyelitis or vitamin deficiencies are considered, the ultimate aim is prevention. Now we are beginning to think of prevention in heart disease, cancer and alcoholism. For this we need an epidemiologic approach to determine the causative factors by identifying the life pattern related to the disease—that is, to ascertain the common characteristics of persons who have it and compare them with characteristics in persons who do not.

The epidemiologic approach involves a knowledge of the entire spectrum of alcoholism and a screening device to identify alcoholics in the early stages of the disease. Then it will be necessary to learn what factors enhance and what factors retard the development of the condition. In the case of alcoholism one thinks of such factors as family and marital relationships, employment ambitions, work experience, religious and cultural aspects. While a great deal is known about excessive drinking in the general population, we have no idea of the drinking habits of normal persons. For this reason there are high hopes that the screening device which identifies persons with a high potential for alcoholism and those with only a slight risk will provide a wealth of invaluable data. With it we can learn the pattern of alcohol usage in the general population and can contrast the drinking habits of various categories of persons.

It is hoped that the division's experience in California in the next five years will provide considerable information about alcoholism, much of it new. Some of the information looked for will deal with favorable and unfavorable factors in the treatment of individual patients; the possibility of biochemical, hormonal or other physiological aspects involved in the disease; the relationship of alcoholism to cirrhosis, mortality, crime, divorce and other antisocial behavior; improved testing techniques, psychological, sociological and physiological; and a clearer idea of drinking habits in the general population.

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CASE REPORTS

Hodgkin's Disease

A Report of Two Cases of More Than Twenty Years' Duration

GEORGE S. SHARP, M.D., and
FRANK C. BINKLEY, M.D., Pasadena

ALTHOUGH MORE than a hundred years has elapsed since it was first described, Hodgkin's disease was clearer in the mind of the original describer than to anyone since his time. From his reports of cases it appeared that the duration of the disease was shorter and there was much less chance for the numerous clinical and pathologic variations to develop. Such diseases in the malignant lymphoma group as lymphosarcoma, leukemia, pseudoleukemia and mycosis fungoides are not only related to Hodgkin's disease in an unknown manner, but there may be a transition from one to the other members during the course of the disease.

Presented in this report are two cases of Hodgkin's disease, each having an unqualified microscopic diagnosis by many pathologists. Both patients have been observed for about 24 years. In one case there was a perplexing clinical diagnostic problem; in the other, therapeutic problems.

Since the customary attitude toward Hodgkin's disease has been one of pessimism insofar as prolongation of life is concerned, it is hoped that this report will be encouraging in that regard and will emphasize the value of persistent therapy. These cases further illustrate the extreme variability of the prognosis in this disease, due to factors of host resistance not yet understood.

REPORT OF A CASE

CASE 1. The patient, a married man, 30 years of age, was first observed in October, 1934. The primary complaint was intermittent rectal bleeding for two years, with soreness and some slight pain on defecation during the previous three months. Upon examination a papillary and ulcerated growth 3 cm. in diameter was noted on the left lateral wall of the ampulla of the rectum. No other abnormality was noted in a complete examination. The pathologist's report on a biopsy specimen was "Adenocarcinoma, Grade IV." Several surgeons said the lesion was inoperable. X-ray therapy was given at California Institute of Technology from September 27 to November 15, 1934; 3,600 r, measured in air, was delivered over each of the four pelvic portals. A recurrence of the growth appeared at the primary site in June, 1935, and radon seeds were implanted. In the following month the patient complained of shortness of breath and headache. There was pitting edema over the scalp, and pronounced swelling of the face and neck, with small nodes in the right and left supraclavicular fossae. Consideration was given to the possibility of lymphoma, particularly Hodgkin's disease, but the diagnosis decided upon was metastasis from the rectal carcinoma. X-ray therapy was given—2,000 r, measured in air, delivered to the three involved areas (supraclavicular fossae and mediastinum). In 1938, a shadow was demonstrated along the lateral border of the heart and this area received 2,000 r. In 1943, the patient com-

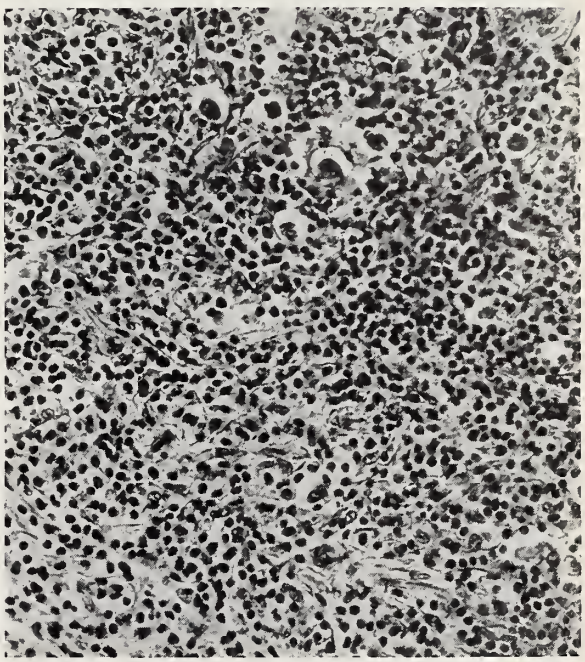


Figure 1 (Case 1).—Section of upper left abdominal mass showing Hodgkin's disease. Pathognomonic reticuloendothelial cells, including characteristic binucleate Reed-Sternberg cells are present.

Submitted July 10, 1958.

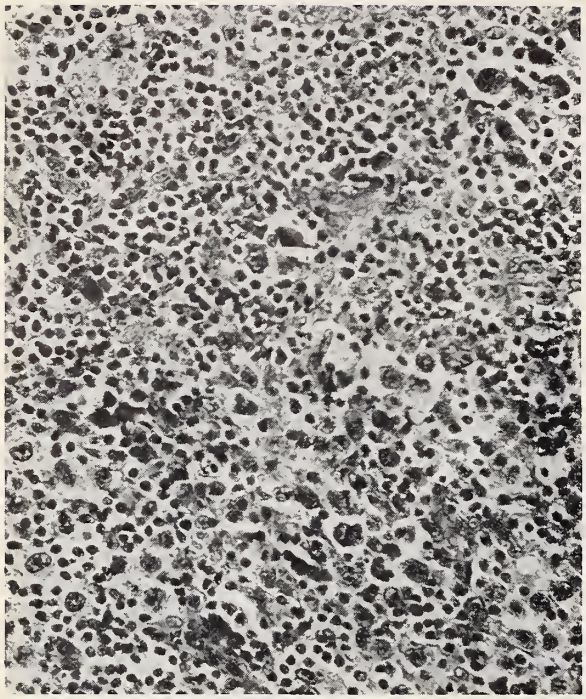


Figure 2 (Case 2).—Section of axillary lymph node showing Hodgkin's disease. Many large pathognomonic reticuloendothelial cells, including some binucleate Reed-Sternberg cells, are present. Characteristic nuclear chromatin arrangement is evident and prominent nucleoli are seen.

plained of an aching soreness in the epigastrium. The left lobe of the liver and spleen were palpable and the left hemidiaphragm was immobile. To determine the full extent of the disease and to obtain a biopsy specimen, laparotomy was done. The disease was confined to the epigastrium and involved lymph nodes, spleen and diaphragm. A positive microscopic diagnosis of Hodgkin's disease was finally established. Roentgen therapy again was given—2,000 r, measured in air, delivered through anterior and posterior portals to the left upper abdomen and diaphragm. For 15 years thereafter, up to the time of this report, the patient remained in excellent general condition and there was no recurrence.

Pathologist's Report. Upon microscopic examination of sections of the biopsy specimen, most of the tissue was found to be quite fibrous and portions were made of mature connective tissue lined by serosa. There was widespread proliferation of young fibroblasts in which there were scattered numerous endothelial cells with vesicular nuclei which varied somewhat in size and showed an occasional mitotic figure. A few cells had two or more nuclei and contained a moderate amount of cytoplasm; histologically they were Dorothy Reed cells. Lymphocytes were present in moderate number and in a few places there were occasional polymorphonuclear cells. In some portions there were more endothelial cells than fibroblasts, and in other parts the converse; but on the whole most of the growth showed considerable fibrosis, and a moderate amount of collagenous stroma was present. The diagnosis was Hodgkin's disease.

Case 2. The patient, a man 33 years of age, was first observed in February, 1936. The primary complaint was swelling of the left lower portion of the neck, first noticed in 1934. Operation was performed in February, 1935, and a diagnosis of Hodgkin's disease was made. Postoperative x-ray therapy was given in March, 1935, and further x-ray therapy in January, 1936. When the patient was first examined by one of the authors, in February, 1936, a visible and palpable mass was presented in the left supraclavicular fossa. Nodes were palpable in both axillae, and a mediastinal mass 8 cm. in diameter was demonstrated by x-ray. In the next 40 days the patient received the following roentgen dosages, measured in air, directed to the mediastinal mass: Anterior, 900 r; right lateral, 650 r; left lateral, 1,100 r; posterior, 650 r. The right axilla received: Anterior, 700 r; lateral, 800 r. The left axilla received 900 r through a lateral portal.* This x-ray therapy was tolerated badly (as was all subsequent roentgen treatment throughout the entire course of the disease). In July, 1936, the left upper mediastinum had not returned to a normal contour, and lymph nodes were still palpable in both axillae. Therefore an additional 900 r, measured in air, was given over the mediastinum, as well as 900 r over each axilla. Two years passed and, in February, 1938, nodes were involved in the right axilla, for which 1,200 r, measured in air, was delivered. The patient then had a remission that lasted ten years, until September, 1948. Then recurrence developed in the mediastinum. Two cycles of x-ray therapy were given to the mediastinum during that year, one in May and the other in October. The total dosage of both series of treatments amounted to 3,600 r, measured in air, to the anterior mediastinum, 2,000 r to the right lateral, 2,400 r to the left lateral, and 2,400 to the posterior portal. In November, 1950, three nodes became enlarged in the right supraclavicular fossa and 2,000 r, measured in air, was delivered.

As the patient's mental outlook became quite pessimistic at this time, it was necessary to see him frequently for encouragement and to make sure he followed a high protein diet with dietary and vitamin supplements.

A year later a node became palpable in the right mid-neck and 2,000 r, measured in air, was delivered. The second longest remission, five years, lasted from 1951 to April 1956. Then a coalesced mass of small nodes appeared in the left lower neck and 2,000 r was delivered. The condition of the patient remained good, as it had since the onset of the disease.

In March, 1958, he had some pain over the dorsal spine. In an x-ray film of the chest evidence of a

*The same x-ray machine was used in both cases presented in this report. The factors were as follows: 200 KVP; 15 ma.; 50 cm. target-skin distance; thoreus filter, giving a half value layer of 1.9 mm. copper.

widening of the paraspinal soft tissue, and films of the spine confirmed this condition. Because of radiation changes in the skin, residual from the previous protracted irradiation, it was deemed advisable to treat this new lesion by a combination of nitrogen mustard and low dosage x-ray therapy. The patient was given 2.0 mg. of nitrogen mustard, then 1,500 r, measured in air, to the thoracic paraspinal mass, utilizing 400 KVP technique.

Pathologist's Report. In sections of lymph node some portions showed varying degrees of fibrosis. Parts of the fibrotic tissue were quite dense and contained very few cells. The entire architecture of the node was disrupted. There was pronounced proliferation of endothelial cells, some of which were multinucleated, forming Dorothy Reed cells. A number of polymorphonuclear leukocytes were mixed with the endothelial cells. A few eosinophiles were seen. The diagnosis was Hodgkin's disease.

Comment

The foregoing case illustrates the more common course of Hodgkin's disease and the problems of therapy. The patient was not as robust or as dynamic as the one described in Case 1. He never made a concerted effort to take the best of care of himself. During the 24-year period that he was under the authors' care, he had 202 examinations and 135 x-ray treatments.

DISCUSSION

X-ray Therapy

The best specific treatment to local areas of Hodgkin's disease is x-radiation. In certain cases in which minimal disease is confined apparently to one superficial node-bearing area, such as unilateral cervical involvement, the therapy of choice is irradiation carried to high dosage levels, with intent to cure. An alternative treatment form is radical surgical operation on the involved area. Heavy irradiation is also recommended if there is mediastinal involvement and for cases in which only two or three areas are clinically involved. When the disease is more generalized, therapy must be divided over all areas, but the dosages are still carried to moderate levels in order to lessen the chance of recurrence in the treated areas. It is well to emphasize two points: First, therapy will fail if it is given at the expense of the patient's general condition; second, the disease must be treated aggressively—a minimum of 2,000 r tumor dose in a relatively short time.

Surgical Treatment

In selected cases surgical operation is definitely indicated. When the disease is confined to one of the superficial node areas, such as the neck or groin, operation may be the treatment of choice. In cases in which the disease is unilateral and confined to the neck, radical neck dissection has been very successful. Several patients so treated have remained well for years without evidence of local recurrence. In a case observed by the authors, a radical groin dissection was performed on a 14-year-old girl in 1955, in lieu of x-ray therapy, and the patient had remained free of disease to the time of this report. However, Craver[1] advised surgical operation only in the exceptional case and recommended postoperative x-ray therapy in heavy dosages over the operative field.

Chemotherapeutic Agents

During the past 15 years, nitrogen mustard has proved a valuable aid for patients with generalized disease; and more recently it has been used to complement x-ray therapy in order that less radiation may be required. Nitrogen mustard may be used temporarily as a life-saving measure, because of its decongestant effect, by giving it before x-ray therapy where often congestant effects of the initial dose cause injurious results. There is no evidence that nitrogen mustard can bring about long remissions such as radiation produces. TEM (triethylenemelamine) is occasionally effective where nitrogen mustard is not, and has the advantage that it may be given orally. Hormone therapy, with corticotropin (ACTH), cortisone or prednisone, has on occasion caused partial regression of lesions in Hodgkin's disease. These are effective particularly in relieving itching, fever and pain, and to an extent, in combating anemia.

Radioactive isotopes have not proved of special benefit in the treatment of Hodgkin's disease.

Both of the patients reported upon herein had meticulous follow-up observations, which is essential in the management of this disease. There are two equally important aspects of treatment: (1) maintenance of the general physical condition, and (2) specific therapy for the involved areas.

The psychological approach to patients with Hodgkin's disease is much the same as that used in cases of tuberculosis—healthy respect for the disease and a hopeful attitude toward it. All supportive measures are advised—regular rest and exercise, a high protein diet, supplementary foods, vitamins, liver extracts, administration of hormones and transfusions to tide over the threatening episodes. Although it is well to practice forward-looking, aggressive treatment, the hope must be kept in mind that there will be more effective therapy in the future.

NOTE: The histologic slides of specimens from the two patients reported upon herein were reviewed by eight pathologists of the Senior Study Group at the Tumor Registry of the Cancer Commission of the California Medical Association. All made a diagnosis of Hodgkin's disease.

635 East Union Street, Pasadena (Sharp).

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Serious Human Infections Due to Bacilli of the Arizona Group

DANIEL KRAG, *M.D.*, and
DUDLEY B. SHEAN, *Ph.D.*, San Jose

ORIGINALLY ISOLATED from sick Gila monsters, horned lizards, and a chuckawalla lizard in 1939, the first discovered strain of the Arizona group of enteric bacilli was considered to be an unusual salmonella variant.[3,10] Then, in the next few years, members of the Arizona group of organisms were identified in material from reptiles, birds, domestic animals and man throughout the United States and in every continent.[5,8,13] There is now abundant evidence that strains of these motile Gram-negative bacilli infect a variety of hosts, commonly invading the blood and producing diseases with high mortality rates in young animals and birds. Particularly troublesome economically have been multiple outbreaks of bird septicemia and diarrhea in turkey farms in California and other states. Loss of as much as 60 per cent of a flock of young turkeys has been reported. These outbreaks have been carefully traced to commercial hatching eggs and to dried egg powder.[7]

Largely through the work of Edwards and his co-workers the Arizona group has been separated from the multitude of enteric bacilli and has been found to comprise a compact biochemical group of bacteria related to both coliforms and salmonellas.[4,6,7,13] They differ enough serologically and biochemically, however, to be regarded by authorities in this field as a separate individual genus, of which approximately 150 serotypes are now recognized.[5,11] Now that these organisms have been more clearly defined, it is no longer appropriate to place them in the vague category of "paracolons."

Infections in man are manifested by a variety of clinical forms, in general resembling salmonella infections. The cases recorded have been even somewhat more severe than the usual cases of salmonellosis, although more experience is needed to determine whether this apparent severity reflects factors of selectivity in recognizing Arizona infections. Mass infections from ingestion of food, with vomiting, diarrhea and fever, have occurred, in which Arizona strains were incriminated. Some of these outbreaks were traced to food such as ice cream and cream pie and to food handlers.[6,12] Typhoidal syndrome has been observed.

Certain serological strains appear to have a propensity for producing localized infections or abscesses. Strains of the commonest serotype in human infections (7:1, 2, 6) appear to be especially invasive. Over half of the strains of this serotype were isolated from infections of organs and tissues other than the intestinal tract in the series of Edwards, McWhorter and Fife.[6] The strains isolated in both of the cases reported herein are members of this serotype (7:1, 2, 6). This type is widely distributed in fowls in California.

Various localized human infections from which members of the Arizona group have been isolated include brain abscess, pleuritis, scalp abscess, conjunctivitis, osteomyelitis,[9] otitis media[2] and liver abscess.

Five deaths apparently resulting from infection by Arizona strains have been listed by Edwards, McWhorter and Fife[6]: (1) A 58-year-old man with severe gastroenteritis. (2) An undescribed patient with an hepatic abscess. (3) A 5-month-old infant with diarrhea. (4) A 5-month-old infant from which a member of the Arizona group was cultured from cardiac blood. (5) One of the cases (Case 1) reported herein.

In spite of the accumulating references to cases of serious human infection in public health reports and microbiological journals, few detailed clinical studies[8,9,12,14] and no detailed autopsy reports have been published.

In the two following cases the chief pathologic lesions consist respectively of (1) a fatal hepatic abscess, and (2) chronic osteomyelitis of the left femur with septic arthritis of the knee joint. In both cases bacilli of the Arizona group were isolated in pure culture from the lesions.

REPORT OF CASES

CASE 1. An 87-year-old white man, was admitted to Santa Clara County Hospital from a lodge rest home where he had been receiving domiciliary care. On the day before admission, convulsions developed unexpectedly. When a physician who was called noted that the temperature was 104°F. and that glycosuria was present, the patient was sent to Santa Clara County Hospital. Upon examination there, the patient was observed to be obese, senile, confused, lethargic and febrile. Abdominal guarding was noted. Neither jaundice nor diarrhea was present.

Leukocytes numbered 11,400 per cu. mm., of which 90 per cent were neutrophils. The blood sedimentation rate was 31 mm. in one hour (Westergren). Blood glucose was 330 mg. per 100 cc. Urinalysis showed 4 plus glycosuria and 2 plus acetonuria. A culture of blood grew no organisms. An area of patchy density in the base of the left lung was observed in an x-ray film of the chest.

The hyperglycemia and mild acetonuria were easily controlled by intravenous fluids and relatively small doses of regular insulin. However, the patient remained stuporous and confused. A spinal puncture was done the day after admission and the initial pressure was 200 mm. of water. The spinal fluid was clear and colorless and contained 4 leukocytes per cu. mm. Cultures of spinal fluid grew no organisms. On the day following admission, the serum sodium was 130 mEq. per liter, the potassium was 5.1 mEq./l. and the CO_2 was 29 mEq./l. The tem-

From the Santa Clara County Hospital, San Jose.

Presented in part before the Section on Pathology and Bacteriology at the 87th Annual Session of the California Medical Association, Los Angeles, April 27-30, 1958.

perature remained elevated, going as high as 104.4°F. (rectal). Hiccupping was an almost continual problem. The patient grew weaker without improvement and died four days after admission. Therapy from the time of admission consisted of penicillin (600,000 units intramuscularly daily), streptomycin (0.5 gm. initially and 0.5 gm. every 6 hours intramuscularly), digoxin (0.5 mg. daily), continual administration of oxygen nasally, and fluids intravenously and subcutaneously.

At autopsy five hours after death, on gross examination three apparently healing, superficial ulcers were noted on the left posterior trunk and there was a similar ulcer over each lateral malleolus. The liver weighed 2030 gm. and was reddish-brown, smooth and glistening. On the superior surface over the right lobe adjacent to the diaphragm was an irregular yellowish area of softening, 10 cm. across. Beneath this area, on sectioning, a large irregular abscess up to 12 cm. was exposed (Figure 1). The abscess was poorly demarcated, multiloculated and filled with yellow-gray viscid purulent material, with several indefinite smaller necrotic foci surrounding the abscess in a patchy distribution. The remainder of the liver substance was uniformly reddish-brown. The gallbladder was scarred and contracted about a single large 3 cm. calculus. No evidence of acute inflammatory reaction was noted in the gallbladder or biliary ducts. The lungs were hyperemic and showed evidence of patchy bronchopneumonia. The heart was moderately concentrically enlarged to 500 gm. The myocardium showed no changes, and there was moderate (Grade II-III) atherosclerosis of coronary arteries. The valves showed no important changes. The spleen was enlarged to 320 gm. and it was soft and mushy, the cut surfaces bulging. The pancreas appeared normal. No significant changes were observed in the entire gastrointestinal tract. Except for a moderate degree of cortical scarring no abnormality was seen in the kidneys. Upon microscopic examination of the liver a multiloculated abscess composed of necrotic hepatic cells and polymorphonuclear exudate was observed. Patchy collections of polymorphonuclear cells were scattered throughout the adjacent hepatic parenchyma (Figure 2). Gram-negative bacilli were easily seen in the abscess. Culture of material from the abscess grew bacilli of the Arizona group. Foci of acute bronchopneumonic exudate were present in the lungs. The splenic red pulp was hypercellular and contained numerous polymorphonuclear and plasma cells. The gallbladder wall was thickened and scarred, without evidence of acute inflammation. Sections of both kidneys showed moderate arterial and arteriolar hypertensive changes. Distinct microscopic stigmata of diabetes mellitus as described by Bell[1] were not found in the kidney or pancreas.

No clinical or autopsy evidence was found to suggest the manner of development of the liver abscess. It seems unlikely that the contracted gallbladder with its calculus was a primary portal of entry. The small skin ulcers also appear unlikely.



Figure 1 (Case 1).—Gross view of liver, showing irregular multiloculated abscess in right lobe containing yellow-gray viscid purulent material. Several indefinite smaller necrotic foci surround the abscess in a patchy distribution.

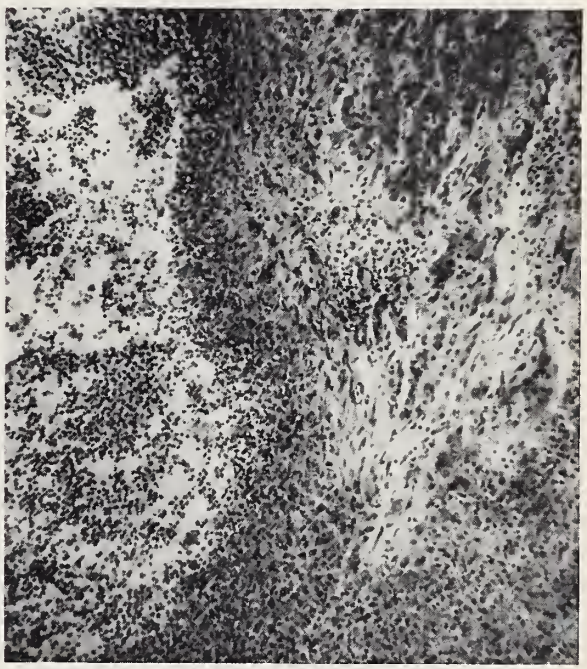


Figure 2 (Case 1).—Microscopic section of liver showing abscess containing acute polymorphonuclear exudate and adjacent necrotic hepatic parenchyma. (Magnification ×80).

No bacteriologic investigation was made of the environment from which the patient was admitted, but it appears most likely that the infection was acquired from contaminated food. The significance of hyperglycemia and glycosuria in this case is conjectural. It may be stated that pyogenic abscesses are not a common complication of diabetes mellitus. From the other point of view, diabetes mellitus has not

been described as occurring in any of the other case reports of Arizona infections.

Case 2. A 63-year-old white housewife was sent by a physician to Santa Clara County Hospital September 2, 1958, because of fever and painful swelling of the left knee. For the previous ten months she had noted gradually increasing aching and swelling of the left knee, which was aggravated by walking. She recalled no significant trauma to the knee. One week before admission the referring physician had aspirated some fluid from the knee joint. The swelling rapidly recurred. Serious past illnesses included acute thrombocytopenic purpura in 1947, for which splenectomy was done, apparently with cure. In 1950 jaundice developed for a short time. This was apparently due to viral hepatitis, and there were no sequelae.

Upon examination at this hospital the chief physical findings were temperature of 103°F. and a swollen, tender and fluctuant left knee. The hemoglobin was 9.2 gm. per 100 cc. and the hematocrit 32 per cent. Leukocytes numbered 16,950 per cu. mm., of which 78 per cent were neutrophils. The urine was normal except for a trace of albumin. The serum albumin was 3.3 gm. per 100 cc., the globulin 3.1 gm. per 100 cc. and the serum total bilirubin 0.9 mg. per 100 cc. The serum VDRL was reactive. Several abnormalities were observed in the left femur in x-ray films taken at the time of admission. These consisted of an irregular sclerosis at the margins of the lower third of the shaft of the femur with periosteal proliferation. Several oval radiolucent areas within the shaft of the femur suggested localized bone absorption. There was no break in the cortex. The appearance was that of chronic osteomyelitis involving the lower third of the femur and its periosteum.

On the day the patient was admitted the knee was aspirated and 450 cc. of thick fluid resembling tomato soup was withdrawn. Cultures of this fluid grew bacilli of the Arizona group. On the sixth day after admission the focus of osteomyelitis was curetted through a 2.5 x 1.5 cm. window in the cortex of the lateral aspect of the distal femur. The cortex had a rough chalky appearance. A copious amount of whitish-yellow cheesy material was curetted from the marrow cavity. No pus was noted in the marrow cavity. Microscopic sections of tissue taken from the knee joint showed nonspecific chronic inflammatory granulation tissue of no distinctive pattern.

Chemotherapy consisted of achromycin orally, 250 mg. four times a day for a prolonged period. The patient had a spiking fever at first, the temperature going up to 103°F. The temperature gradually subsided in the ensuing three weeks and then remained within a normal range. The surgical wound continued to drain fluid, however, and no improvement of the bony lesions was seen radiographically. A more extensive curettage of the medullary canal was performed December 3, 1958. Multiple cultures of curetted material grew Arizona bacilli of the strain previously isolated from the knee joint effusion.*

BACTERIOLOGIC OBSERVATIONS

Bacilli of the Arizona group were isolated in pure culture from infected material in both cases. In Case 1 direct smears of pus from the liver abscess taken at autopsy showed Gram-negative bacilli similar to coliforms. Pus was inoculated on eosin-methylene-blue agar, Salmonella-Shigella agar and nutrient blood agar plates, and small colorless colonies grew overnight on all plates. Cultures of these were subsequently identified as members of the Arizona group by Dr. P. R. Edwards at the Communicable Disease Center at Chamblee, Georgia. In Case 2 bacilli of the Arizona group were repeatedly isolated in pure culture from fluid aspirated from the left knee joint and from infected necrotic material curetted from the medullary canal of the left femur. Cultures of these organisms were also identified by Edwards. In both cases the strains were found to be members of the same serologic type (7:1, 2, 6).

Subcultures of both strains had the following fermentation reactions: Lactose, no fermentation at 24 hours. (Acid was produced by subcultures of the strain of Case 1 after several transfers); salicin, no fermentation; sucrose, no fermentation; maltose. acid and gas; mannitol, acid and gas; dextrose, acid and gas; triple sugar iron agar, alkaline slant with acid, gas and H_2S in the butt. The organisms were motile, were negative for indole production and had no hydrolytic effect on urea. They caused a slight liquefaction of gelatin after ten days. There was positive reaction to methyl red but not to a Voges-Proskauer test.

Following the lead of Murphy and Morris,[12] who found that their infected patients developed agglutinating antibodies against the infecting Arizona strain, we tested the serum of the patient of Case 2 for the presence of antibodies against both Arizona strains which had been isolated in Case 1 and Case 2. Her serum was found to agglutinate Arizona bacilli isolated from her leg lesion to a serum dilution of 1:1280. In addition, serum from that patient agglutinated bacilli of the strain which had been isolated from the liver abscess in Case 1 to a serum dilution of 1:640. As a check against nonspecific cross reaction, serum of the patient in Case 2 was tested for antibodies against S. typhosa (H and O), S. paratyphi A, S. paratyphi B, and P. tularensis, and no agglutination was demonstrated against these.

DISCUSSION

The emergence of a newly recognized group of pathogenic enteric bacilli introduces several problems. It is apparent that bacterial pathogenicity is a relative quality, ranging at one extreme from the ability to develop progressive invasion of the body

*The patient died on February 6, 1959, 30 hours after another extensive sequestrectomy of the left femur. At autopsy there was bilateral bronchopneumonia. Organisms of the Arizona group were isolated at autopsy from the medullary cavity of the left femur but not from the lungs or blood.

when introduced by any route and at the other extreme to only a weak ability to multiply and grow when introduced directly into tissues. The ability of a given strain of enteric bacilli to produce symptoms in most of the individuals infected varies decidedly in both the species of hosts infected and the individuals infected. The evidence that members of the Arizona group are primary incitants of disease when ingested is very strong. The epidemiology of the infections in fowls has been particularly clear-cut, and there have been repeated instances in which it was possible to trace the transmission of infection through eggs.[5,7] Multiple outbreaks of severe gastroenteritis in man in which epidemiologically significant Arizona strains were isolated from the affected persons and not from asymptomatic persons have been well documented. Following the infections, the patients developed antibodies against the corresponding Arizona strain.[12] In some of these outbreaks the corresponding Arizona strain was isolated from food or food handlers. As a corollary to this, Arizona strains are rarely isolated from asymptomatic persons. Direct evidence of their ability to invade and multiply is supplied by the isolation of organisms from primary abscesses or other localized infections unassociated with the presence of foreign material in tissue and unassociated with other known pathogenic organisms.

Clinicians may well wonder why a group of organisms related to salmonellas and similar in their pathogenicity is not simply classified as a salmonella. The viewpoint of experienced workers in the isolation and epidemiology of enteric organisms is stated by Edwards, Cherry and Bruner[4]: "Without clear concise generic definitions [of salmonellas] the worker in a diagnostic laboratory is at a decided disadvantage. To relax the generic definition would lead inevitably to placing many atypical coliforms of doubtful pathogenic significance in that genus." For these reasons the Arizona species were placed in a separate genus.

Although they usually grow well on ordinary laboratory media used to isolate enteric pathogens, members of the Arizona group are difficult to recognize in the clinical laboratory and can be identified only by complex serological typing in special salmonella typing centers. In the clinical laboratory they are most likely to be confused with salmonellas, an error which is not especially serious. A much more important problem of recognition is encountered when an unrecognized Arizona strain ferments lactose early—and many strains apparently have this property.[15] The reason for this is that it is almost universal practice in clinical laboratories to consider a culture of an enteric bacillus which ferments lactose to be a nonpathogenic organism and to report it to the clinician as a coliform or paracolon. This reliance on lactose fermentation to screen out potentially dangerous organisms is, of course, very useful in general diagnostic bacteriological practice, but permits an unknown number of lactose-fermenting Arizona strains, as well as epidemiologically significant strains of E. coli, to go unrecognized.

An improved method for early recognition of this group in the clinical laboratory is needed.

SUMMARY

Bacilli of the Arizona group were isolated in pure culture of material from a fatal case of acute liver abscess in an 87-year-old white man and from a 63-year-old white woman who had chronic osteomyelitis of the left femur with septic arthritis of the knee joint.

The Arizona genus comprises a group of widely distributed pathogenic Gram-negative enteric bacilli which are related to both salmonellas and coliforms. Arizona strains have produced serious human infections with a high degree of invasiveness and occasional death. Members of this group are easily isolated and grown in the clinical laboratory, but are difficult to recognize.

ACKNOWLEDGMENT: The authors are grateful to Mrs. Elizabeth Smith, Librarian of Santa Clara County Hospital Library, for assistance in gathering the bibliography and to Messrs. Edward Chong and Charles Taddo of Santa Clara County Photography Department for assistance in preparing the illustrations.

Santa Clara County Hospital, San Jose-Los Gatos Road, San Jose (Krag).

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Q Fever Manifested by Anemia and Hepatitis

GEORGE K. HURWITZ, M.D., and
JOSEPH C. McLAUGHLIN, M.D., San Francisco

Q FEVER is often thought of as a disease primarily involving the respiratory system and characterized clinically by patchy pneumonitis demonstrable by x-ray with associated fever, headache and myalgia. Actually, since Q fever is a systemic disease, its manifestations depend on the system or systems affected and do not necessarily include pulmonary involvement. Derrick, who first described Q fever in Australia in 1937,[6] noted respiratory symptoms consisting of slight cough in only two of nine patients. In one case the clinical manifestations consisted chiefly of anemia, jaundice and prolonged fever. Since that time Q fever has been reported from many areas in the world,[14] and cases with such variable manifestations as arthritis,[12] meningitis[8] and pericarditis[10] have been described.

The purpose of this report is to emphasize the systemic nature of Q fever and to illustrate the diagnostic problems in a case in which the striking clinical features were hepatitis, anemia and the absence of pulmonary involvement.

REPORT OF A CASE

A 50-year-old white man was admitted to hospital on May 3, 1958, with a diagnosis of fever of unknown origin of one month's duration.* He had first become ill on April 2, with a sudden attack of fever, myalgia, anorexia, left occipital headache and numbness along the distribution of the right ulnar nerve. There were no symptoms referrable to the respiratory tract. On subsequent physical examination no abnormalities were observed.

The patient said that he had been employed as a rural mail carrier in Lodi, California, for 17 years. Although he had made frequent visits to his brother's cattle farm, he denied direct contact with animals or ingestion of raw milk. He had no history of serious illnesses.

Treatment with tetracycline, 1 gm. daily for three days, and chloromycetin, 1 gm. daily for an additional three days, both given orally, was ineffective. The patient continued to have spiking fevers, with rises in temperature as high as 103°F. twice daily. Two weeks after the beginning of the attack, the hematocrit determination was 40 per cent. Liver function tests showed that bromsulfalein retention, albumin-globulin ratio and icteric index were within normal limits; however, cephalin flocculation was 4 plus in 24 hours. An x-ray film of the chest showed no abnormalities. Results of blood and urine cultures and agglutination tests for typhoid, paratyphoid and brucellosis were negative. Blood smears were negative for malaria. Serum drawn on April 18 and May 1 was sent to the laboratory of the California State Department of Public Health for viral and rickettsial studies.

When he entered the hospital on May 3, the patient had a temperature of 100°F. During the preceding month he had lost 17 pounds in weight. The liver had a firm edge but was not enlarged or tender. The lungs were clear to auscultation. There was no evidence of lymphadenopathy, splenomegaly or jaundice. Leukocytes numbered 8,000 per cu. mm.; the differential count was normal. Hematocrit determination was 44 per cent. Results of urinalysis were within normal limits. X-ray examination of the chest showed no abnormalities. Results of the following procedures were negative: Skin tests for tuberculosis, coccidioidomycosis and histoplasmosis, serologic tests for typhoid, paratyphoid A and B, brucellosis, tularemia and leptospirosis, a heterophil agglutination test, and repeated routine blood and urine cultures. No pathogenic bacteria or parasites were found in the feces. Results of liver function tests were as follows: Cephalin flocculation, 4 plus in 24 and 48 hours; thymol turbidity, 8 units; albumin, 3.1 gm. per 100 cc.; globulin, 4.6 gm. per 100 cc.; total bilirubin, 0.4 mg. per 100 cc., cholesterol, 203 mg. per 100 cc.; cholesterol esters, 143 mg. per 100 cc.; alkaline phosphatase, 6 units (Bodansky); bromsulfalein retention, 6 per cent in 45 minutes; prothrombin time, 90 per cent. Paper electrophoresis showed an increase in serum globulin content, primarily of the alpha-2 fraction. On biopsy, the liver showed no pathologic changes.

Spiking fevers continued for the next week. During this time a normochromic, normocytic anemia developed and the hematocrit concentration gradually dropped to a low of 28 per cent. Reticulocyte counts and bone marrow smears were normal. Results of a Coombs test and of repeated examinations of stool specimens for occult blood were negative. Urinary and fecal urobilinogen content were within normal limits. Blood volume studies utilizing radiochromium-tagged red cells showed a 20 per cent reduction in red cell mass, and frequent sampling indicated that the red cell survival time was normal.

A diagnosis was finally established by the demonstration of a rise in the titer of complement-fixing antibodies for Q fever from 1:16 in serum taken April 18 to 1:64 in serum taken May 1. The titer remained at 1:64 as determined by subsequent tests on May 12 and May 22. Although no specific therapy was given, the fever gradually subsided after a total duration of five weeks. On June 18, two and a half months after the onset of illness, the patient still complained of weakness and had occasional elevations in temperature to 99.6°F. (oral). The hematocrit concentration at that time had risen to 45 per cent, but the cephalin flocculation was 2 plus in 24 hours and 3 plus in 48 hours.

From the Department of Medicine, University of California School of Medicine.

Submitted August 29, 1958.

*Referred by H. E. Hoff, M.D., Lodi, California

DISCUSSION

The diagnosis in the present case was established by the demonstration in the patient's serum of complement-fixing antibodies specific for Q fever.[1] The rise in antibody titer and a clinical course similar to that described in cases of Q fever in older adults[2] indicate that the infection was of recent origin. It is possible that an even greater rise in titer might have been observed if serum had been drawn earlier in the acute stage of the patient's illness. The fact that all other clinically compatible conditions were ruled out further supported the diagnosis. Also, the onset of the disease in April is in accord with the reported seasonal incidence of Q fever in Northern California.[5] Although the source of the infection could not be determined definitely, the patient's occupation as rural mail carrier and his exposure to livestock suggest inhalation of dust infected by animal excreta.

The principal clinical features were hepatitis, anemia, prolonged fever and the absence of pulmonary involvement. In such cases the differential diagnosis may appear to lie chiefly between infectious hepatitis, amebic hepatitis and the hepatitis of infectious mononucleosis.[2] In the present case the hepatitis was manifested by a firm liver edge, reversed albumin-globulin ratio and abnormal cephalin flocculation values. The latter was the striking and persistent finding; results of other liver function tests were either borderline or normal. Biopsy showed no pathologic changes in the liver, although Gerstl, Movitt, and Skahen[9] found that often in Q fever there is evidence of focal hepatocellular damage in liver biopsy specimens. They also commented on the lack of correlation between results of liver function tests and biopsy findings in Q fever, as in the present case.

The cause of the anemia which developed late in the course of the illness could not be determined. Since laboratory tests failed to show evidence of hemolysis or blood loss, the anemia may have been related to a decreased production of red blood cells. Anemia of uncertain cause may develop in any prolonged case of febrile rickettsial infection and a decreased red cell volume has been documented in epidemic typhus.[13] In a report of a fatal case of Q fever, Perrin[11] described areas of hypoplasia in specimens of sternal marrow taken at autopsy, although before death the hemoglobin content of the blood had been normal. Also of interest is the recent report of an "angiitis" in histologic sections of bone marrow from a patient with Q fever.[7] Clark and associates,[4] in an analysis of the clinical features in 180 cases of Q fever, noted a correlation between anemia and evidence of hepatic disease; conversely, anemia has been reported in patients without hepatitis.[12] In the case herein reported, anemia developed and subsequently disappeared without apparent relation to the hepatitis.

A febrile course of more than four weeks was described in 30 of the 180 cases of Q fever reported by Clark and associates.[4] In 28 of the 30 cases the patients were over 30 years of age, and several patients in this age group did not respond well to treatment with adequate doses of chlortetracycline.[3] In the present case the antibiotic therapy was not adequate in dosage or duration, but even without the use of antibiotics in the large doses usually required, the fever gradually subsided and the patient was well.

SUMMARY

Involvement of the respiratory tract is relatively frequent in Q fever. Since Q fever is a systemic infection, however, the clinical manifestations vary widely and do not always include pulmonary symptoms. This is particularly true in adults over 30 years of age. To illustrate the diagnostic problems in such instances, this report describes a case of Q fever characterized clinically by nonicteric hepatitis, anemia, prolonged fever and lack of clinical or x-ray evidence of pneumonitis.

University of California Medical Center, San Francisco 22 (Hurwitz).

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EDITORIAL

Twenty Years After

TWENTY YEARS AGO last month a group of serious and far-sighted California physicians brought California Physicians' Service into the world as the first statewide medically-sponsored medical care prepayment plan in the country.

Since that time C.P.S. has often been referred to as the "doctors' own baby." If this appellation is accurate, it is obvious today that the baby has grown to considerable stature while passing through its childhood, adolescence and teen-age periods.

Designed to provide a budget method for people of low incomes to meet their medical care costs, C.P.S. has served many additional purposes in its twenty years of existence.

Behind the whole concept—this is a bit of history which is new to many of California's more recent physicians—lay more than twenty years of study by physicians and others who were aware of the need of the common man to be able to budget his own funds so that he would be able to pay the physician and the hospital when these services were needed. The records behind C.P.S. go back to studies made as early as 1917.

Other studies, including the review of the costs of medical care under a voluntarily-financed commission headed by the late Ray Lyman Wilbur, the California medical-economic survey of 1934-1935, and the experience of several county medical societies in offering prepayment plans in other states, were added to the research material which went into California Physicians' Service.

An added impetus, probably not needed but certainly most suggestive, was the attempt of former California Governor Culbert L. Olson to have enacted a statewide compulsory health insurance plan as a part of the laws of California. Some observers claim that C.P.S. was created simply as the profession's answer to this threat; more knowledgeable and experienced physicians admit that the Olson threat served as a spur to the profession but was not the primary factor in the establishment of this new plan.

Regardless of the impact of political machinations on its origin, C.P.S. was incorporated in February, 1939, and started on an admittedly empirical course of providing complete medical and surgical services for subscribers at a low monthly rate of dues. The empirical part of the procedure was bound up in the fact that nobody had ever before tried to provide such a service; the utilization and cost of such service was based on nothing more than guesswork.

Within a short time the "bugs" in this approach began to show up. There was excessive utilization. (An extreme example: One patient visited five physicians on her day off from work.) There was an evident backlog of unmet medical needs (one family presented five children for simultaneous tonsillectomy soon after coverage was in effect). There were even excesses by some physicians who rationalized that the way to offset the low fees paid by C.P.S. on the basis of funds available to meet the units of medical service provided was to add more units to cover unneeded visits or even visits never made.

Some of these drawbacks were serious enough to cause entire county medical societies to doubt the wisdom of the program. In at least two instances, county societies threatened to "secede" from the California Medical Association.

With the advent of World War II came other problems. New citizens imported from other states were jammed into government housing projects, where their only access to medical care was through an organized program under which C.P.S. underwrote the cost of the service in exchange for a few dollars a month collected as part of the rent by the housing authorities. These programs, each organized around a single housing project, operated with varying degrees of dissatisfaction. Where the dues for housing project residents had been calculated

on the basis of normal expectations of illness, the actuaries had not calculated that the birth rate would jump from 22 births per thousand to more than 110. When these programs were finally dropped (after the war) C.P.S. could truthfully state that the only epidemic it had encountered in the war housing projects was an epidemic of babies.

Following the war, C.P.S. was called upon to act in behalf of the physicians in the home-town medical care program of the Veterans' Administration. This plan has now operated for more than 12 years and has been effective in providing veterans with home-town medical care for service-connected disabilities, rather than forcing them to travel to VA facilities and register as in-patients before they could see a physician.

More recently, C.P.S. has been asked to serve as fiscal agent for the "Medicare" program, serving the dependents of military personnel. In this role the organization has processed thousands of cases in which patients are treated by California physicians instead of being shunted to military hospitals staffed by drafted physicians.

In the past two years C.P.S. has again been asked to serve as a fiscal agent, this time under the social welfare laws. Today the organization is handling this work for 34 of the state's 58 counties.

These activities, coming on top of C.P.S.'s continued coverage of employed groups and individuals under the voluntary plans developed from the original prepayment concept, have demonstrated the versatility that C.P.S. can offer. Where many physicians in years past thought of C.P.S. as an interloping third party, they have now come to the conclusion that this is their own organization, their own shield against unwarranted interference in medical practice by government or commercial interests.

Today, after twenty years of growth, C.P.S. can proudly point to a record of more than a quarter billion dollars disbursed to the physicians of California in behalf of their enrolled patients. It can point to an annual business of more than $35 million in its regular program, plus added millions as agent for the Veterans' Administration, Medicare and the social welfare plans. It can, with notable justification, display itself as the one medical prepayment plan which, acting for, through and by physicians, protects the interests of all physicians and serves as a model for its contemporaries. Without C.P.S. in the picture, only wild conjecture could guess what progress would have been made in commercial and other prepayment plans operating without this constant spur and example.

California Physicians' Service has earned the respect and admiration of California physicians through the sheer weight of its positive accomplishments. It is fitting to salute it on the occasion of its completion of 20 years of service.



NOTICES & REPORTS



PAUL D. FOSTER, M.D.

Paul D. Foster, M.D., New C.M.A. President-Elect

NEW PRESIDENT-ELECT of the California Medical Association is Paul D. Foster, M.D., of Los Angeles.

Doctor Foster was elected at the C.M.A.'s 88th Annual Session held February 22 to 25 in San Francisco, succeeding T. Eric Reynolds, M.D., of Oakland. He will be installed as President at the C.M.A.'s annual meeting in 1960.

Doctor Foster has practiced medicine in California since 1935, specializing in dermatology and syphilology. He has wide experience in medical affairs on the local, state and national levels.

Vice-Speaker of the C.M.A. House of Delegates in 1955, he was, until elected to his new post, a Councilor on the state Association's Council, representing the Third District (Los Angeles County). He is a delegate to the American Medical Association and a member of the C.M.A. Committee on Postgraduate Activities, on which he serves as chairman of the Motion Picture Division. He is also a member of the Bureau of Economic Research and Planning of the C.M.A.

Doctor Foster has long been prominent in the activities of the Los Angeles County Medical Association, having served that organization with outstanding distinction as a councilor from 1945 to 1951; as secretary-treasurer for two consecutive terms, 1951 and 1952; and as president in 1953. He has been a member of the L.A.C.M.A. board of trustees since 1951.

Born at Corry, Pennsylvania, Doctor Foster received his preliminary education at Manual Arts High School and the University of California at Los Angeles.

He was graduated from the College of Medical Evangelists School of Medicine in Los Angeles in 1932. After serving his internship at Los Angeles County General Hospital, he received further training at New York Skin and Cancer Hospital and Clinic and also the New York Postgraduate Medical

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School Department of Dermatology. He is a founder of the Student Medical Association.

A Diplomate of the American Board of Dermatology, Doctor Foster is an associate clinical professor of dermatology and syphilology at the College of Medical Evangelists School of Medicine, and is a member of the advisory committee to C.M.E.'s Audiovisual Postgraduate Extension Program, having served as director of the program until January of this year. He is director of medical education for Encyclopaedia Britannica Films, Inc.

Doctor Foster is a member of numerous professional, scientific and academic organizations, and the author of more than 50 scientific publications in his field. He is active in civic, fraternal and veterans affairs.

Doctor and Mrs. Foster reside at 2477 Ridgeway Road, San Marino, with their son and daughter, Lawrence Dean, 21, and Sandra Lee, 20. Both children are pre-medical students, Lawrence at U.C.L.A. and Sandra at the University of Arizona.

Biggest C.M.A. Meeting

New record highs in attendance of physicians and of guests were set at the eighty-eighth annual meeting of the California Medical Association which was held in San Francisco, February 22 to 25. Registration of physicians totaled 3,322. Guests—members of the Woman's Auxiliary, exhibitors, friends and members of the families of physicians—numbered 2,030. The total was 5,352.

Among its actions the House of Delegates:

Installed Dr. T. Eric Reynolds of Oakland as president.

Passed a resolution directing California Physician's Service to set up a prepayment medical care plan at reduced rates for persons over 65 years of age whose income is inadequate for full payment.

Adopted a committee recommendation that employers be urged to abandon arbitrary retirement of workers at age 65.

Set dues for the 1959-1960 fiscal year at $55 per member.

Elected the following California Medical Association officers and councilors and American Medical Association delegates and alternates. (An additional councilor was elected to represent District 7 owing to an increase in the membership of San Francisco Medical Society to more than one thousand; and an additional delegate to the A.M.A. was elected, bringing California's total to 17, as a result of the increase in C.M.A. membership to more than 17,000 during the past year.)

In the following lists an asterisk (*) beside a name indicates the person elected was the incumbent.

California Medical Association officers elected:

President-Elect.....Paul D. Foster, Los Angeles
Speaker of the House of Delegates.....James C. Doyle,* Los Angeles
Vice-Speaker.....Ivan C. Heron,* San Francisco

Councilors, elected for three-year terms:

Omer W. Wheeler,* Riverside. *Second district*—Imperial, Inyo, Mono, Orange, Riverside and San Bernardino counties.

Malcolm C. Todd,* Long Beach. *Third district, Office No. 1*—Los Angeles county.

Arthur F. Kirchner,* Los Angeles. *Third district, Office No. 4.*

William F. Quinn, Los Angeles. *Third district, Office No. 2* (to serve out unexpired term of Paul D. Foster, President-Elect).

Byron L. Gifford, Santa Barbara. *Fourth district*—San Luis Obispo, Santa Barbara and Ventura counties.

Samuel R. Sherman,* San Francisco, and

Donald M. Campbell, San Francisco. *Seventh district*—San Francisco county. (Campbell elected to new seat created by increase in membership.)

Ralph C. Teall,* Sacramento. *Tenth district*—Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo and Yuba counties.

Election of delegates and alternates to A.M.A. for two-year terms:

Delegates	*Alternates*
Henry Gibbons, III* San Francisco	Claude P. Callaway* San Francisco
Sam J. McClendon* San Diego	John M. Rumsey* San Diego
Eugene F. Hoffman* Los Angeles	Gerald W. Shaw* Santa Monica
Warren L. Bostick San Rafael	Francis H. O'Neil Eureka
J. B. Price Santa Ana	Charles Hudson Oakland
Frank A. MacDonald* Sacramento	J. E. Vaughan* Bakersfield
Paul D. Foster* Los Angeles	Arthur A. Kirchner* Los Angeles
Donald A. Charnock* Los Angeles	Carl M. Hadley* San Bernardino
H. Milton Van Dyke Long Beach	Omer W. Wheeler Riverside
	Samuel R. Sherman† San Francisco

C.P.S. Trustees—Three-year term:

Dr. Bert Halter,* San Francisco; Dr. Paul I. Hoagland,* Pasadena; Mr. Guy W. Wadsworth, Jr.,* Los Angeles; Dr. Angus C. McDonald, Los Angeles; Dr. John E. Vaughan, Bakersfield.

In an organizational change, the House of Delegates amended the by-laws to permit the appointment of someone other than the secretary of the Association to the chairmanship of the Committee on Scientific Work. This was done in order that Albert C. Daniels, who has resigned as secretary, may continue his work with the committee. A new secretary has not yet been named.

†Takes place of H. Milton Van Dyke as alternate to J. Lafe Ludwig.

In Memoriam

AREHART, ARTHUR A. Died in Palo Alto, January 2, 1959, aged 63. Graduate of Long Island College Hospital, Brooklyn, New York. Licensed in California in 1927. Doctor Arehart was a retired member of the Monterey County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✤

BARRETT, GILBERT MICHAEL. Died January 10, 1959, aged 88. Graduate of Bellevue Hospital Medical College, New York, 1895. Licensed in California in 1898. Doctor Barrett was a member of the San Francisco Medical Society.

✤

BOST, FREDERIC CARROLL. Died in Belvedere, February 2, 1959, aged 58, of heart disease. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1926. Licensed in California in 1926. Doctor Bost was a member of the San Francisco Medical Society.

✤

CARY, RAYMOND JOHN. Died in Long Beach, January 7, 1959, aged 73. Graduate of Johns Hopkins University School of Medicine, Baltimore, Maryland, 1912. Licensed in California in 1918. Doctor Cary was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✤

CHERWIN, NATHAN HALE. Died December 21, 1958, aged 59. Graduate of Columbia University College of Physicians and Surgeons, New York, 1924. Licensed in California in 1924. Doctor Cherwin was a member of the Los Angeles County Medical Association.

✤

COOLEY, CHESTER LYNN. Died January 22, 1959, aged 64, of heart disease. Graduate of Stanford University School of Medicine, Stanford-San Francisco, 1928. Licensed in California in 1928. Doctor Cooley was a member of the San Francisco Medical Society.

✤

DARLING, HERBERT HENRY. Died in San Rafael, January 23, 1959, aged 58. Graduate of Harvard Medical School, Boston, Massachusetts, 1925. Licensed in California in 1925. Doctor Darling was a member of the San Francisco Medical Society.

✤

DICKSON, ARCHIBALD JOHN. Died in Altadena, January 11, 1959, aged 79. Graduate of McGill University Faculty of Medicine, Montreal, Quebec, 1903. Licensed in California in 1932. Doctor Dickson was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✤

FREYERMUTH, OTTO GEORGE. Died in San Francisco, January 19, 1959, aged 82. Graduate of the Hahnemann Medical College and Hospital, Chicago, Illinois, 1903. Licensed in California in 1903. Doctor Freyermuth was a member of the San Francisco Medical Society.

✤

HAIRE, ROBERT DONNELL, JR. Died in Glendale, January 12, 1959, aged 54. Graduate of Jefferson Medical College of Philadelphia, Pennsylvania, 1928. Licensed in California in 1952. Doctor Haire was a member of the Los Angeles County Medical Association.

JAMESON, JANE. Died in Castro Valley, January 20, 1959, aged 35. Graduate of University of Wisconsin Medical School, Madison, Wisconsin, 1948. Licensed in California in 1953. Doctor Jameson was a member of the Alameda-Contra Costa Medical Association.

✤

JONES, JOSEPH LAURENCE. Died in Los Angeles, January 5, 1959, aged 63. Graduate of Columbia University College of Physicians and Surgeons, New York, 1919. Licensed in California in 1943. Doctor Jones was a member of the Los Angeles County Medical Association.

✤

REIS, ABILIO G. DE SILVA. Died in Piedmont, February 3, 1959, aged 66. Graduate of Universidade de Lisboa Faculdade de Medicina, Portugal, 1919. Licensed in California in 1922. Doctor Reis was a member of the Alameda-Contra Costa Medical Association.

✤

SCHOONMAKER, GUY DANIEL. Died in San Francisco, January 14, 1959, aged 67, of heart disease. Graduate of Vanderbilt University School of Medicine, Nashville, Tennessee, 1917. Licensed in California in 1922. Doctor Schoonmaker was a member of the San Francisco Medical Society.

✤

SEKIYAMA, ISAMI. Died January 1959, aged 67. Graduate of Tohoku Imperial University Medical Faculty, Sendai, Japan, 1915. Licensed in California in 1919. Doctor Sekiyama was a member of the Los Angeles County Medical Association.

✤

STANIFORD, KENNETH J. Died in Fresno, January 25, 1959, aged 69. Graduate of Cooper Medical College, San Francisco, 1911. Licensed in California in 1911. Doctor Staniford was a retired member of the Fresno County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✤

TAYLOR, J. PHYROMM. Died in Los Angeles, December 29, 1958, aged 60, of heart disease. Graduate of Meharry Medical College, Nashville, Tennessee, 1922. Licensed in California in 1936. Doctor Taylor was a member of the Los Angeles County Medical Association.

✤

TUOHY, EDWARD BOYCE. Died in Los Angeles, January 12, 1959, aged 50, of a cerebral hemorrhage. Graduate of University of Pennsylvania School of Medicine, Philadelphia, 1932. Licensed in California in 1939. Doctor Tuohy was a member of the Los Angeles County Medical Association.

✤

VAN PELT, CLIFFORD A., JR. Died January 27, 1959, aged 49. Graduate of University of Kansas School of Medicine, Lawrence-Kansas City, 1937. Licensed in California in 1946. Doctor Van Pelt was a member of the Los Angeles County Medical Association.

✤

WILSON, GUSTAVE. Died in Sacramento, December 3, 1958, aged 83, of complications of cerebral vascular disease. Graduate of University of Michigan Homeopathic Medical School, Ann Arbor, 1903. Licensed in California in 1904. Doctor Wilson was a member of the Sacramento Society for Medical Improvement.

NINTH ANNUAL
REGIONAL POSTGRADUATE INSTITUTE
SOUTHERN COUNTIES

Presented by Committee on Postgraduate Activities of the California Medical Association, in cooperation with Orange, Riverside and San Bernardino County Medical Societies, and the University of California, San Francisco, Seymour M. Farber, M.D., Assistant Dean for Continuing Medical Education.

Disneyland Hotel . . . April 23 and 24, 1959

PROGRAM

THURSDAY, APRIL 23, 1959

Morning Session

Emotional Problems in the Daily Practice of Medicine

9:00-9:45 a.m.—**Emotional Problems of Patient and Doctor**—Edwin Frederick Alston, M.D.

9:45-10:30 a.m.—**The Psychotherapeutic Approach to Emotional Problems**—Edward M. Weinshel, M.D.

10:45-12:00 noon—**Three Panel Symposia** (you may go to one of your choice):
The Nervous Patient in Office Practice
The Psychotherapeutic Value of Listening
Psychological Impacts of Illness

12:00-2:00 p.m.—Luncheon
Panel: **Face to Face with the Psychiatrist**

Afternoon Session

Gastrointestinal Motility

2:00-2:45 p.m.—**The Medical Approach to Nausea, Vomiting and Heartburn**—John V. Carbone, M.D.

2:45-3:30 p.m.—**The Diagnosis and Treatment of Intestinal Gas, Pain and Diarrhea**—Emanuel Friedman, M.D.

3:45-5:00 p.m.—**Three Panel Symposia—Emotions and the Gastrointestinal Tract** (you may go to one of your choice):
Emotions and the Upper Gastrointestinal Tract
Emotions and the Middle Gastrointestinal Tract
Emotions and the Lower Gastrointestinal Tract

7:30-10:00 p.m.—Cocktails and Dinner (wives invited)

FRIDAY, APRIL 24

Morning Session

Gynecologic Endocrinology

9:00-9:45 a.m.—**Endocrinologic Aspects of the Pubescent Period**—Paul Scholten, M.D.

9:45-10:30 a.m.—**Endocrinologic Procedures and Practices in the Menopausal Patient**—Edmund W. Overstreet, M.D.

10:45-12:00 noon—**Three Panel Symposia** (you may go to one of your choice):
Emotional Problems in Marriage
Emotional Problems in Pregnancy
Emotional Problems in Menopause

12:00-2:00 p.m.—Luncheon
Panel: **Psychological Resources of the Physician**

Afternoon Session

General Surgery

2:00-2:45 p.m.—**Surgical Considerations and Treatment of Pain**—Benson B. Roe, M.D.

2:45-3:30 p.m.—**Surgery in the Dying Patient**—Orville F. Grimes, M.D.

3:45-5:00 p.m.—**Three Panel Symposia** (you may go to one of your choice):
The Surgeon and Authority
Psychological Reactions of the Patient to Surgery
Emotional Recovery and Rehabilitation Following Surgical Procedures

HOST: Orange County Medical Society . . . **REGIONAL CHAIRMAN:** Edmund F. Cain, M.D., 200 N. Palm, Anaheim, California . . . **Institute Fee:** $25.00 . . . For additional information contact Postgraduate Activities office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5. **All California Medical Association members and their families are cordially invited to attend.**

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

THE California Tumor Registry received its 200,000th report of neoplasm during the first week in January, maintaining its standing as the largest single registry in the world.

The registry is now engaged in a series of studies based upon information in its files. One such study, a collaborative effort of the registry, the C.M.A. Cancer Commission and the California Society of Pathologists, will test the validity of published survival rates for cancer of the breast. Three outstanding pathologists in the state are independently rereading the slides on which the original diagnoses of breast cancer were based.

Decided improvement in quality of pathologic specimens has been recorded in the 15-year experience of cancer cases in the 38 hospitals currently participating in the registry. The proportion of cases confirmed by histopathology has risen from 73 per cent in 1942-46, to 92 per cent in 1956. Follow-up information is being obtained on 91 per cent of all cancer cases.

* * *

The department's Viral and Rickettsial Disease Laboratory is working on a simplified test for the diagnosis of rabies. Once perfected, the test will remove all doubt in a matter of days, making known whether the rabies vaccine treatment must be started.

At present, prompt diagnosis depends upon finding specific virus inclusion bodies in diseased tissues of the suspected animal. Sometimes these inclusions are absent or not typical, making quick microscopic diagnosis difficult or impossible.

For this reason, studies are underway to develop a simplified test. The laboratory is using a specific antibody to which a fluorescent dye is coupled chemically. If rabies virus is present in the tissue the antibody added unites with the virus. Since the antibody is tied to the fluorescent dye, this highly specific fluorescence can be seen through the microscope when ultraviolet light is shined upon the tissue.

* * *

The State Advisory Hospital Council held public hearings January 21 and 22 in Los Angeles to consider policies for the fiscal year beginning July 1, and to reallocate state and federal hospital construction funds of $1,776,818.

The council recommended establishment of planning objectives for hospital development in the Los Angeles metropolitan region, which includes all of Los Angeles and Orange counties, and the contiguous areas of Riverside and San Bernardino counties.

The planning is based on an anticipated population of 12,000,000 in the region by 1975, and consideration is being given to the geographic distribution of this population and the development of hospitals between now and 1975 in an orderly manner to meet the communities' needs at that time.

Metropolitan regional planning in the state has been endorsed and supported by the California Hospital Association, the Hospital Council of Southern California and the Welfare Planning Council of Los Angeles.

The need for such planning has been recognized and emphasized by the experience in hospital development during the last ten years. Between 1950 and 1958, 56 out of the 67 hospitals built in Los Angeles County were under 100 beds. If this pattern continues through 1975, there will be 204 hospitals under 100 beds out of a total of 290 hospitals in the county. The construction of hospitals large enough to provide total patient services is perhaps the most difficult problem in developing long-range planning for metropolitan regions.

The council recommended for the 1959-60 State Plan for Hospital Construction the establishment of the Los Angeles metropolitan region with long-range planning objectives and criteria for development of individual facilities within the region. Within the region, individual hospital service areas are established to delineate geographic areas which have some community of interest for hospital and medical purposes related to an established community center, and which may be expected to have an estimated minimum population of 250,000 by 1975.

In addition, individual general hospitals in each area should provide for a minimum capacity of 150 beds. The policies and criteria established for the Los Angeles metropolitan region for 1959-60 will be subject to annual review and modified as warranted by changing conditions. In addition,

basic policies developed for this region will be reviewed in connection with study of the other metropolitan regions in California.

During 1959-60, in the allocation of state and federal funds, general hospital projects in the Los Angeles metropolitan area shall not be considered unless they propose complete facilities of not less than 150 general hospital beds each. These policies will not in any way change the existing methods for estimating need for hospital beds in individual areas or in the determination of priority sequence for consideration of allocations.

From funds allocated August 12, 1958, $1,776,818 in state funds and an equal amount in federal funds were not utilized by three hospitals and were reallocated to the following projects: East Bay Lutheran Hospital, San Leandro, $663,894; St. Rose Hospital, Hayward, $181,128; San Jose Hospital, San Jose, $25,000; Rancho Los Amigos, Downey, $408,090; Santa Clara County Hospital, San Jose, $498,706; Fairmont Hospital of Alameda County, $268,430.

* * *

Two members of the department's Viral and Rickettsial Disease Laboratory have contributed chapters to the recently published third edition of the book "Viral and Rickettsial Diseases of Man," edited by Rivers and Horsfall.

Dr. Edwin H. Lennette, chief of the laboratory, contributed chapters on serologic reactions in viral and rickettsial infections, and on Q fever. Dr. Harald Johnson prepared a chapter on rabies.

Dr. Johnson is a member of the Rockefeller Foundation staff assigned to the Viral and Rickettsial Disease Laboratory, where he has been working the last four years.

For Your Patients—

A Personal Message to YOU:

As your personal physician I consider it both a privilege and a matter of duty to be available in case of an emergency. Consequently, I thought it would be a good precaution if—on this gummed paper which can be pasted in your telephone book or medicine cabinet—I listed the numbers where I can be reached at all times. They are:

_____ OFFICE

_____ HOME

Sincerely,

_____, M.D.

MESSAGE NO. 2. Attractive, postcard-size leaflets printed on gummed paper, you to fill in telephone numbers and your signature. Available in any quantity, at no charge, as another service to CMA members. Please order by Message Number from CMA, PR Department, 450 Sutter, San Francisco.

WOMAN'S AUXILIAR

TO THE CALIFORNIA MEDICAL ASSOCIATIO

We can assure you, gentlemen, that our motto for this year . . . "Cooperate and Achieve" . . . has been satisfactorily fulfilled, insofar as was possible in this ten-month year.

Due to the pressure of the advanced date for our annual convention, every county auxiliary accelerated its program in a determined effort to present a report comparable to recent years.

The preliminary records of all of them give promise of a substantial increase in all departments. When the final records are compiled at the close of the fiscal year on the county level, we hope to show the normal expectancy in yearly growth.

In an early issue of California Medicine we will give you the facts and figures to substantiate our advance judgment and we're sure you will be pleased with the scope of our influence.

As a result of the energetic work of our treasurer, Mrs. Charles Sprague, and the state and county membership chairmen, we can report an increase in membership as of this date, and we hope to increase it even more before the May deadline.

We have stressed "community service" particularly, and an effort is being made to poll the number of hours that auxiliary members devote to their individual community voluntary health organizations and civic activities.

It is gratifying to know that nearly all the various women's organizations have more than a fair share of physicians' wives on their rosters—in most instances in leadership capacities. Topping the list in this respect are the P.T.A., the Y.W.C.A., the Girl Scouts and the Cancer Society, followed by A.A.U.W., the Heart Association and many child welfare organizations.

Hundreds of Student Nurse Clubs are directed by members of the auxiliary. Local high schools are most enthusiastic about this program.

The baby sitter groups, "GEMS" (Good Emergency Mother Substitutes) have hundreds of teen-agers enrolled, also directed by auxiliary members.

Nurses' scholarships and loan funds have increased, and annual parties and benefits continue to supply the funds to support the American Medical Education Foundation and Physicians' Benevolence.

We have every reason to be proud of the work of physicians' wives. They are proving to be outstanding leaders. And as members of the Auxiliary to the medical societies, they are of ever increasing value to the profession.

It is our proud privilege to be a part of what you as individuals and as members of your profession represent. Incidentally, we might add that we are seriously aware of the fact that, as your profession goes, so goes our way of life.

Much hard work goes into these activities to promote good will and understanding for the fundamentals of good public health and medical standards as you hope to keep them.

This has been a banner year in the growth of closer relations between the Association and the Auxiliary.

In proportion to your encouragement and help, our enthusiasm rises and our work becomes a pleasure. We appreciate everything you do to help us. Without your cooperation, it wouldn't be possible to accomplish the tremendous results that we achieve.

Your San Francisco office personnel doesn't hesitate when we make a request. Mr. John Hunton and Bob Thomas exert every effort to be of assistance to us, interceding for us with the Council—publishing *The Courier*, which, by the way, continues to be the top medical auxiliary publication in the nation. Doctor Wilbur and Mr. Edwards have been most generous with extra space in California Medicine. Our grateful appreciation to them for their kind remarks, too.

Special consideration by the Council and by our Advisory Board has given us confidence, as well as the assurance that we need, of your appreciation.

The members of our board of directors have concentrated this year on improving organizational policies to strengthen our assistance to the counties.

The stimulation motivated by the unprecedented cooperation of the Association has created the enthusiasm for efficient action by the members of the Auxiliary board of directors, which has undoubtedly reacted on the county level, where the actual working program has achieved such fabulous results.

With your continued interest and support, we will continue to grow.

Thank you for all the courtesies extended to me personally this year.

Mrs. Newell Jones
President, Woman's Auxiliary to the California Medical Association

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

Reappointment of **Dr. Joseph M. de los Reyes** of Glendale to the California State Board of Medical Examiners for a four-year term was announced recently by the office of Governor Edmund Brown. Doctor de los Reyes was first appointed in February, 1955.

* * *

The Medical Advisory Board of the **Myasthenia Gravis Foundation** wishes to call attention of the members to the Second International Symposium on Myasthenia Gravis, which will be held in Los Angeles at the Statler Hotel on Saturday and Sunday, April 18 and 19. A wide selection of papers dealing with the anatomy, physiology and biochemistry of muscle and the clinical and pathological features of myasthenia gravis will be presented by many world wide authorities.

* * *

A distinguished achievement award for "significant contributions to human health and welfare" has been made to **Dr. Tracy J. Putnam,** neurologic surgeon associated with the Cedars of Lebanon Hospital. The award was announced by the board of medical editors of *Modern Medicine*, which annually makes the awards.

Doctor Putnam was specifically cited for "A lifetime of fruitful endeavor in teaching and practice and neurologic research into the nature of convulsive disorders."

MERCED

Dr. Shelby M. Hicks of Merced has been appointed to the California State Board of Medical Examiners by Governor Edmund Brown. Dr. Hicks replaces Dr. Clayton Mote of San Francisco, who had served since October, 1947.

SAN DIEGO

The 1959 annual convention of the California chapters of the **American Physical Therapy Association** is to be held April 4 and 5 at the U. S. Grant Hotel in San Diego. On Saturday, April 4, at the general meeting, a distinguished panel of speakers will present an informative program concerning many phases of geriatrics and the physical therapist's approach to the patient.

SAN FRANCISCO

Dr. Robert Stone, professor and head of the department of radiology, University of California School of Medicine, San Francisco, was awarded the gold medal of the American College of Radiology at the annual meeting of the organization in Chicago in February. The medal, highest award by the college, is given for outstanding contribution to radiology.

* * *

Dr. Norman Kretchmer, an associate professor at Cornell Medical School, will succeed Dr. Robert H. Alway as head of Stanford University's department of pediatrics. The appointment, effective July 1, was announced today by Dr. Alway, who now is dean of Stanford Medical School. Dr. Ruth T. Gross, associate professor, has been acting head of pediatrics for the past two years.

Dr. Kretchmer last year received the American Academy of Pediatrics' E. Meade Johnson Award for distinguished pediatric research.

* * *

The **San Francisco Heart Association** has announced the opening of a contest for The William J. and Dorothy Fish Kerr Prize of $350 for the best original observation in the clinical field of cardiovascular disease and embracing diagnosis and treatment, with particular emphasis upon the use of the special senses and the sense of touch at the bedside.

Any intern, resident or resident fellow in any hospital in the San Francisco Bay Region (all the counties which are contiguous with San Francisco Bay) is eligible. The applicant should submit a written description of the observation he has made, and with it a supporting letter from the chief of the hospital service in which the observation was made.

These materials should be submitted before April 15, 1959, to Charles A. Noble, Jr., M.D., chairman, Awards Committee, San Francisco Heart Association, Inc., 259 Geary Street, San Francisco 2.

* * *

The 36th annual meeting of the **American Orthopsychiatric Association** will be held in San Francisco, at the Sheraton-Palace Hotel, March 30 to April 1, 1959.

GENERAL

An **Oregon Cancer Conference** is to be held July 16 and 17, 1959, in Portland under the joint sponsorship of the Oregon State Medical Society, the Oregon Division of the American Cancer Society, the University of Oregon Medical School and the Oregon Academy of General Practice. The conference is planned for midsummer as a special feature of the Oregon Centennial celebration.

A block of rooms has been reserved at the Hotel Multnomah for physicians wishing to attend the conference. A copy of the complete program and hotel reservation forms may be obtained by writing to Roscoe K. Miller, executive secretary, Oregon State Medical Society, 1115 S. W. Taylor Street, Portland 5, Oregon.

* * *

The **American College of Obstetricians and Gynecologists** will hold its annual meeting in Atlantic City, April 6 to 8, with general sessions in Convention Hall. An attendance of about 2,000 physicians is anticipated.

Further information may be had by writing to Mr. Donald F. Richardson, executive secretary, The American College of Obstetricians and Gynecologists, P. O. Box 749, Chicago 90.

* * *

The **American College of Chest Physicians** will hold its silver anniversary meeting at the Ambasador Hotel, Atlantic City, June 3 to 7, 1959. The scientific program will include prominent speakers on all aspects of heart and lung diseases. In addition to formal presentations, there will be a number of symposia, round table luncheon discussions, postgraduate seminars, and motion pictures.

Fireside conferences, inaugurated in 1955, will feature more than 60 experts in chest disease leading discussions on topics of current interest.

* * *

The **Biennial Western Conference on Anesthesiology** will be held in Phoenix, Arizona, April 1 to 4, at the Westward Ho Hotel. Further information may be obtained from Boyden L. Crouch, M.D., 301 West McDowell Road, Phoenix.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgraduate education programs and the meetings of various medical organizations in California is supplied by the Committee on Postgraduate Activities of the California Medical Association. In order that they may be listed here, please send communications relating to your future medical or surgical programs to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Diagnostic Radiology. Friday and Saturday, March 20 and 21. Twelve hours. Fee: $55.00 (includes lunch).

Multidisciplinary Approach to the Management of Sports Injuries. Wednesday and Thursday, March 25 and 26. Thirteen hours. Fee: $15.00 (includes lunch).

The Place of Adrenal Steroids in the Treatment of Disease. Friday and Saturday, April 3 and 4. Fourteen hours. Fee: $15.00.

Current Developments in Nutrition (Arrowhead). Friday, Saturday and Sunday. April 24, 25 and 26. Ten hours. Fee: $50.00 (includes board and room).

Clinical Laboratory Interpretations. Thursday, Friday and Saturday, May 21, 22 and 23. Nine hours.*

Techniques of Hypnosis. Monday, Tuesday and Wednesday morning, June 15, 16 and 17. Fifteen hours. Fee: $65.00.

Advanced Techniques and Application of Hypnosis. Wednesday afternoon and Thursday and Friday, June 17, 18 and 19. Fifteen hours. Fee: $110.00.

Sterility. Friday and Saturday, July 24 and 25. Twelve hours.*

Anesthesiology. Wednesday, Thursday and Friday, August 5, 6 and 7. Fifteen hours.*

Three Symposia at University of California Residential Conference Center, Lake Arrowhead:

Pediatric Cardiology. Sunday through Wednesday, August 16 through 19. Fifteen hours.* Guest speaker: John Lind, M.D., Stockholm, Sweden.

Emotional Problems in Office Practice. Wednesday through Sunday, August 19 through 23. Fifteen hours.*

Seminars in Internal Medicine. Sunday through Wednesday, August 23 through 26. Fifteen hours.*

Clinical Traineeships—Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

*Fees to be announced.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Diagnostic Radiology. Friday through Tuesday, March 20 through March 24. Thirty-five hours. Fee: $80.00.

Infection and Immunity (Children's Hospital). Saturday, March 21. Seven hours. Fee: $12.50.

Advances in Occupational Health. Thursday and Friday, March 26 and 27. Fourteen hours.*

Enzymes—Basic and Clinical Aspects. Thursday, Friday and Saturday, April 2, 3 and 4. Twenty-one hours.*

Weekend Seminars for Medical Technologists. Saturday and Sunday, April 4 and 5. Ten hours. Fee: $15.00.

Nursing in Rehabilitation. Monday to Friday, April 27 through May 15. One hundred and five hours. No fee.

Ear-Nose-Throat. Friday and Saturday, May 15 and 16. Fourteen hours. Fee: $40.00.

Pediatrics. Wednesday through Saturday, June 17 through 20. Twenty-eight hours.*

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Assistant Dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Conference on Physiology and Therapeutic Uses of Adrenal Steroids. March 20 and 21, at Stanford Campus in Stanford. No fee.

Postgraduate Conference in Office Dermatology. March 20 and 21. Fee: $50.00.

Symposium on Adrenal Steroids. Friday and Saturday, March 27 and 28. Twelve hours.*

Annual Spring Postgraduate Conference in Ophthalmology. April 6 through 10, at Stanford Eye Bank, San Francisco. Fee: $100.00. *Contact:* Mrs. Alice Crouch, Postgraduate Secretary, Stanford Medical School, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

Fluid and Electrolyte Balance. March 20 through 22. Hotel Statler, Los Angeles. In addition to introductory lectures, there will be supervised practice on cases which demonstrate electrolyte and water imbalance. Tuition: $75.00.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14. (As a time and money saver, round trip air travel is also possible July 29 to August 10.)

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Head and Neck (14 periods, 63 hours), April 22 through June 3. Tuition: $75.00.

Surgical Anatomy—Head and Neck (12 periods, 24 hours), April 22 through June 3. Tuition: $35.00.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: Chairman: Committee on Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE INSTITUTES

San Joaquin Valley Counties in cooperation with College of Medical Evangelists, March 19 and 20, Hotel California, Fresno. Chairman: Owen Steinbach, M.D., 3004 Fresno St., Fresno.

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, Jr., M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25 and 26, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued early this year. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

MARCH MEETINGS

Pioneers Memorial Hospital 9th Annual Postgraduate Medical and Surgical Convention. March 20 and 21, program by University of Colorado Medical School. *Contact:* George Jaquith, M.D., secretary, Route 1, Box 70, Brawley, Calif.

Southern California Society of Gastroenterology Meeting, March 24, 8 p.m., at Los Angeles County Medical Association headquarters. *Contact:* Sherman M. Mellinkoff, M.D., secretary, UCLA Medical Center, Los Angeles 24.

Nevada Division, American Cancer Society First Annual Seminar, March 25 and 26, Riverside Hotel, Reno. *Contact:* Ralph Nelson, executive director, P. O. Box 55, Carson City, Nevada.

San Francisco Heart Association Nurses Institute "Care of the Cardiac Patient," March 25 and 26, 8:30 a.m. to 3:30 p.m., Marina Jr. High School, 3500 Fillmore Street, San Francisco. *Contact:* Jean Sullivan, program director, 259 Geary Street, San Francisco.

American Orthopsychiatric Association 36th Annual Meeting, March 30 through April 1, Sheraton-Palace Hotel, San Francisco. *Contact:* Donald Shaskan, M.D., chairman, Arrangements Committee, Veterans Administration, 49 Fourth St., San Francisco 3.

APRIL MEETINGS

American Group Psychotherapy Association 5th Annual Western Regional Meeting. April 2 and 3, Sheraton-Palace Hotel, San Francisco. 9:00 a.m. to 5:00 p.m. each day. *Contact:* H. S. Morgenstern, M.D., Langley-Porter Clinic, University of California Medical Center, San Francisco 22.

California Tuberculosis and Health Association and California Trudeau Society Annual Meeting, April 2 through 4, Villa Motor Hotel, San Mateo. *Contact:* Mrs. Mary C. French, 130 Hayes Street, San Francisco.

American Academy of General Practice. April 6 through 9, San Francisco. *Contact:* Mr. M. F. Cahal, executive secretary, Volker Blvd. at Brookside, Kansas City 12, Missouri.

Los Angeles County Heart Association Workshop on Work Simplification Techniques for Physicians, Nurses, Occupational Therapists, Physical Therapists, Dietitians, Social Workers. April 7, 1959, Southern California Gas Co., 810 South Flower Street, Los Angeles, 9 a.m. to 4:30 p.m. *Contact:* Rea M. Schneider, M.D., chairman, Heart of the Home Subcommittee, 660 S. Western Avenue, Los Angeles 5.

Long Beach Surgical Society "Clinic Day"—Lectures and Round Table Discussions. April 11, 2:00 p.m., Virginia Country Club, 4602 Virginia Road, Long Beach. *Contact:* F. Harriman Jones, M.D., secretary-treasurer, 211 Cherry Ave., Long Beach 2.

American Academy of Pediatrics Spring Meeting, April 13 to April 15, Sheraton-Palace Hotel, San Francisco. *Contact:* Charles H. Cutler, M.D., state chairman, Northern California Chapter, 2615 I Street, Sacramento.

American Academy of Neurology. April 13 through 18, Statler Hotel, Los Angeles. *Contact:* Joseph M. Foley, M.D., Boston City Hospital, Boston, secretary.

Cancer Commission, California Medical Association Cancer Conference for Ventura County Medical Society. April 14, Oxnard.*

American Surgical Association. April 15 through 17, Fairmont Hotel, San Francisco. *Contact:* W. A. Altemeier, M.D., secretary, Cincinnati General Hospital, Cincinnati 29.

Palo Alto Medical Clinic Second Annual Medical Symposia: Cardiology and Immunology, April 18, 8:30 a.m., Clinic Auditorium. *Contact:* John F. Weigen, M.D., program chairman, Palo Alto Medical Clinic, Palo Alto, Calif.

Bakersfield Surgical Society Meeting, April 18, 8:30 p.m. *Contact:* Chas. P. Marvin, M.D., 2628 G Street, Bakersfield.

American Society of Internal Medicine 3rd Annual Meeting. April 19, Conrad Hilton Hotel, Chicago. *Contact:* Clyde C. Greene, Jr., M.D., assistant secretary-treasurer, 350 Post Street, San Francisco 8.

American College of Physicians Meeting, Conrad Hilton Hotel, Chicago, April 20-24, 1959. *Contact:* Mr. E. R. Loveland, executive secretary, 4200 Pine Street, Philadelphia 4.

Hawaii Medical Association Annual Meeting, April 23 through 25, Hilo. *Contact:* Miss Lee McCaslin, executive secretary, 510 S. Beretania Street, Honolulu 13.

MAY MEETINGS

Los Angeles County Heart Association Annual Membership Meeting, May 6, 12 noon, Statler Hotel. *Contact:* C. A. Alexander, executive director, 660 S. Western Avenue, Los Angeles 5.

The Nevada Academy of General Practice Annual Meeting, May 21 through 23, Riverside Hotel, Reno. Program by University of Southern California School of Medicine. *Contact:* Roy M. Peters, M.D., chairman, 475 S. Arlington Avenue, Reno, Nevada.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

SUMMER AND FALL MEETINGS

Western Branch, American Public Health Association Annual Meeting. June 2 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

Rocky Mountain Cancer Conference, Scientific only, July 22 through 23, 9:00 a.m., Brown Palace Hotel, Denver. *Contact:* N. Paul Isbell, M.D., chairman, 835 Republic Building, Denver 2, Colorado.

Nevada State Medical Association, Annual Session, jointly with Reno Surgical Society, August 19 through 22, Mapes Hotel, Reno. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, executive secretary, 1309 Seventh Avenue, Seattle, Washington.

Oregon State Medical Society Annual Meeting, September 23 through 25, Medford, Oregon. *Contact:* Mr. Roscoe K. Miller, executive secretary, 1115 S.W. Taylor St., Portland 5, Oregon.

San Francisco Heart Association 29th Annual Postgraduate Symposium on Heart Disease. September 30, October 1 and 2, 9 a.m. to 5 p.m. daily, St. Francis Hotel, San Francisco. *Contact:* Lawrence I. Kramer, Jr., executive director, 259 Geary Street, San Francisco 2. YUkon 2-5753.

Western Industrial Medical Association, Inc. 18th Annual Meeting, held in conjunction with Third Western Industrial Health Conference, all day October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

California Society of Internal Medicine Annual Meeting, October 2 through 4, Miramar Hotel, Santa Barbara. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Clyde C. Greene, Jr., M.D., secretary-treasurer, 350 Post Street, San Francisco 8.

California League for Nursing Annual Meeting, October 8 through October 10, U. S. Grant Hotel, San Diego. *Contact:* Ruth I. Jorgensen, general director, Room 202, 465 Post St., San Francisco 2.

American Academy for Cerebral Palsy Annual Meeting, November 30 through December 2, Statler Hotel, Los Angeles. *Contact:* Margaret H. Jones, M.D., local arrangements chairman, associate professor of pediatrics, UCLA School of Medicine, Los Angeles 24.

*Contact: Walter E. Batchelder, M.D., Medical Director, C.M.A. Cancer Commission, 450 Sutter Street, San Francisco 8.



THE PHYSICIAN'S *Bookshelf*

TREATMENT OF BREAST TUMORS—Robert S. Pollack, M.D., F.A.C.S.; Clinical Instructor in Surgery, Stanford University School of Medicine; Clinical Instructor in Surgery (Oncology), University of California School of Medicine; Assistant Chief of Surgery, Mount Zion Hospital, San Francisco, California; Consulting Surgeon, Oakland Veterans' Administration Hospital; Consulting Surgeon, Oakland Naval Hospital, Oakland, California. Lea & Febiger, Philadelphia, 1958. 147 pages, with 47 plates and 16 text figures, $6.00.

This comprehensive but brief volume is devoted to the treatment of breast tumors including those of cystic mastitis. The classification used is simple and workable and avoids the impractical detail so frequently encountered in such classifications.

Diagnostic criteria are briefly discussed. The technical procedures of excisional biopsy and removal of benign tumors and other pathological processes are described and illustrated.

As would be expected the major portion of the book deals with the various aspects of carcinoma. The importance of exploration of small tumors is stressed. The author's criteria of operability which are reasonably widely accepted are presented. The practical difficulties confronting the surgeon in determining operability are well covered.

Consideration is given to the indications for simple, modified radical, standard radical and extended radical mastectomy. The procedures are described and illustrated.

The chapters on irradiation list the indications for its use and the methods employed are outlined. The limitations of irradiation in cancer of the breast are well discussed.

Additive and subtractive hormone therapy is well handled. The proper use of estrogens, androgens and adrenal cortex hormones is presented. Oophorectomy, adrenalectomy and hypophysectomy are evaluated as adjuncts to therapy.

In controversial areas the author presents opposing views. An effort is made to arrive at fair and balanced conclusions without being dogmatic. The bibliography is extensive and up to date.

The brevity and readability of this work recommend it. The author has succeeded in presenting a surprising amount of material in 142 text pages. It is a good source of ready reference.

JOHN W. CLINE, M.D.

* * *

RORSCHACH TEST DIAGNOSIS—A Textbook in Rorschach Test Diagnosis, for Psychologists, Physicians and Teachers—Ewald Bohm, Ph.D. Translated by Anne G. Beck, M.A., and Samuel J. Beck, Ph.D., Professional Lecturer, University of Chicago, Associate, Michael Reese Hospital. Grune & Stratton, New York, 1958. 322 pages, $7.75.

Since the Second World War there has been increasing concern, both in this country and in other parts of the world, about the one-way character of scientific literature, i.e., the U. S. sends its texts and journals to other countries, but we tend to know little about the material from them. Many more scientists of other lands know English than we know their languages. Increased travel and international meetings are helping in part to increase the communication among scientists and professional people of the many countries, but there still is great need for us to be better informed. Thus it was rewarding to this reviewer to read the Beck translation of Dr. Bohm's text on *Rorschach Test Diagnosis.*

Dr. and Mrs. Beck, prominent in national and international literature on the Rorschach test, have translated from the German volume and made available a view of European use and understanding of the test. The "Translators' Preface" by the Becks surveys the text succinctly and is in itself an admirable review. Bohm's clinical skill and his enthusiasm with the Rorschach test are clearly apparent, together with his knowledge of both European and American literature on the test.

The text is complete in its presentation, beginning with instructions on the method of administering the test, recording and scoring responses, and summarizing them. Also reviewed are intelligence, affectivity, typologies ("Schizaffinic" and "Ixothymic" will be strange to American readers and the latter must translate into his own concepts these descriptions), the neuroses, psychopathies (constitutional or "genuine," and "organic pseudopsychopathies"), depressions, and psychoses. The volume closes with a review of the literature on the test in its use with children, instructions about administration, and cautions about interpreting Rorschach test data from children.

IVAN N. MENSH, Ph.D.

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EMOTIONAL PROBLEMS OF CHILDHOOD—Edited by Samuel Liebman, M.D., Medical Director, North Shore Hospital, Winnetka, Ill.; Clinical Assistant Professor of Psychiatry, University of Illinois College of Medicine. J. B. Lippincott Company, Philadelphia, 1958. 176 pages, $5.00.

There continues to be a search for an adequate book on the emotional problems of young children suitable for a wide variety of practitioners. This collection of articles is an excellent step in this direction. The book covers the psychological aspects of the relations between children and their parents from pregnancy forward. There are special chapters on speech disorders and the handicapped child. Considerable emphasis is given to behavior problems in adolescents and the general management of puberty and sex in adolescents.

On the whole, the articles are well written, clear, and surprisingly even, despite a variety of authors. The two chapters on speech disorders and delinquency do not exactly represent the same school of psychological thinking as do the other papers, and perhaps are not as valuable for this reason. By contrast, the two articles covering parent-child relationships and the psychological development of infants are excellently presented.

This is a recommended book for all those whose practice deals with parents concerned about their children.

HENRY H. WORK, M.D.

CHLOROMYCETIN (Chloramphenicol) — Antibiotics Monographs, No. 8—Theodore E. Woodward, M.D., and Charles L. Wisseman, Jr., M.D., University of Maryland School of Medicine, Baltimore, Maryland; with the collaboration of Harry M. Robinson, Jr., M.D., George Entwisle, M.D., Fred R. McCrumb, Jr., M.D., and Merrill J. Snyder, Ph.D. Foreword by Joseph E. Smadel, M.D. Medical Encyclopedia, Inc., 30 East 60th Street, New York 22, N. Y., 1958. 159 pages, $4.00.

This is the eighth in a series of monographs produced through the efforts of Dr. Henry Welch, director of the Division of Antibiotics of the Food and Drug Administration. Each of these small books is written by a specialist on a particular antibiotic and presents the laboratory and clinical aspects of the drug as a synthesis of the published evidence with the author's personal experience. The present volume on chloramphenicol is undoubtedly one of the best of the series. Drs. Woodward and Wisseman were part of the team assembled by Dr. Smadel in 1948 to study chloramphenicol, the first antimicrobial drug which had a marked therapeutic effect on rickettsial diseases. During their initial studies in Malaya they observed the effect of chloramphenicol in salmonella infections as well as scrub typhus and soon thereafter it became apparent that the drug was likewise valuable in a host of other bacterial infections. With the recognition of the "broad spectrum" nature of chloramphenicol came its large scale abuse: Millions of doses were consumed to treat the "common cold" and as an inevitable consequence the toxic side effects (particularly blood dyscrasias) gained publicity quite out of proportion to their real incidence. As a result only negligible quantities of chloramphenicol were prescribed for several years and the drug did not regain its proper place in the medical armamentarium until 1955-57 when its frequent effectiveness against drug-resistant staphylococci was reemphasized. For some reason the authors fail to describe this dramatic up-and-down in the fame and fortune of chloramphenicol. That is one of the very few faults that can be found with the monograph. It condenses in a concise and factual manner the chemical, pharmacological and clinical properties of the drug as they emerged from 738 references and the author's own large experience. There are particularly good chapters on rickettsial diseases, salmonellosis, bacterial meningitis and staphylococcal infections.

Although the book is probably too detailed for the practicing physician, it might do well as a source of ready reference in his library and I suspect that the volume could be obtained without cost from any sales representative of the manufacturer of chloramphenicol. The monograph will be indispensable for medical libraries.

ERNEST JAWETZ, M.D.

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CLINICAL OBSTETRICS AND GYNECOLOGY—December 1958—A Quarterly Book Series—Volume 1, Number 4—Symposium on Operative Obstetrics, Edited by J. Robert Willson, M.D.; and Symposium on Genital Cancer, Edited by Daniel G. Morton, M.D. Published by Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 16, N. Y., 1958. $18.00 per year for four consecutive numbers issued quarterly (by subscription only).

This is another in the series on clinical obstetrics and gynecology published by Paul B. Hoeber, Inc. It contains symposia on operative obstetrics, edited by J. Robert Willson and on genital cancer, edited by Daniel G. Morton. Like the preceding symposia each contains a series of discussions on the important aspects of the respective subjects by authors who have been interested in their particular assignments. This means that we have presented representative contemporary thought. For the most part the chapters are concise and to the point. While I believe that these volumes were aimed at physicians in general practice it seems to me that they have a much wider applicability. The presentations would certainly be of interest to students, residents, and to specialist obstetrician-gynecologists as expressing the present best approved practices.

The symposium on operative obstetrics contains chapters on Dystocia Due to Large or Abnormal Fetus, Breech Extraction, Forceps Delivery, Cesarean Section, Obstetric Version, Sterilization and Therapeutic Abortion and several others. Among the contributors are Thomas R. Goethals, Chas. A. Stevenson, R. A. Cosgrove, Roy G. Holly, Robert Barter and Keith P. Russell. It would be impossible to attempt a description of the contents of each chapter. For the most part the viewpoints expressed are representative, sound and reliable. To single out one point, it does seem to me that Goethals plugs delivery of the breech by means of operative decomposition and extraction at full dilatation more than it deserves. I believe that his view is not really representative of current authoritative opinion.

The symposium on cancer of the female genital tract contains treatises on Early Diagnosis by Herbert Traut, Radiation Treatment of Cervical Cancer by Herbert Schmitz, Operative Treatment of Cervical Cancer by Joe Meigs, Exenteration Operations by Alexander Brunschwig, and Ovarian Cancer by Howard Taylor. Also covered are carcinoma of the vulva and vagina, the endometrium and the Fallopian tubes.

The treatment of these subjects is entirely clinical, of course, and on a down-to-earth practical level.

DANIEL G. MORTON, M.D.

* * *

EMERGENCY TREATMENT AND MANAGEMENT—Second Edition—Thos. Flint, Jr., M.D., Director, Division of Industrial Relations, Permanente Medical Group, Oakland and Richmond, California, and Chief, Emergency Department, Permanente Medical Group, Kaiser Foundation Hospital, Richmond, California. W. B. Saunders Company, Philadelphia, 1958. 539 pages, $8.00.

In this 539-page book the author has placed in outline form conditions encountered in the emergency departments of clinics and hospitals that require immediate management. From the foreword one reaches the conclusion that this source of material is particularly adaptable in urgent and life saving situations. The book itself does not fulfill that objective.

For example, under acute abdominal conditions there are listed thirty-six different illnesses including porphyria, vitamin deficiency and radiculitis. Such a complex list of illnesses could not serve a useful purpose to an experienced physician and would add to the confusion of an inexperienced intern.

This book includes an outline on pruritis ani and insomnia which seems out of place in a text on emergency room treatment and management.

On the complimentary side, the book has an up-to-date section on the diagnosis and management of cardiac arrest, head injuries, drowning, bullet wounds, and such accidents encountered under dramatic circumstances in an emergency ward or hospital.

This book would serve satisfactorily for the senior medical student or intern on an emergency service. It would be a readily available source in outline form to help more systematically organize his thinking in emergency states.

Twenty-two pages are used to outline "Administrative, Clerical and Medicolegal Principles and Procedures."

This book could well be recommended for the graduating medical student or intern anticipating service on the emergency ward or as a ready reference in acute emergencies when time would not permit him to read more extensively.

JOHN G. WALSH, M.D.

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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Volume 90 APRIL 1959 Number 4

Changing Viewpoints in Neurology as Illustrated by Certain Aspects of Cerebrovascular Disease

J. ST. C. ELKINGTON, *M.D., F.R.C.P.*, London

• The touchstone of success in the progress of clinical neurology during the latter half of the last century was the careful correlation of clinical observations with the known anatomic facts and, later, the pathologic and physiologic knowledge of the central nervous system.

During the past twenty-five years the limitations of this classical approach have become apparent, as has the need for newer methods and the adoption of a dynamic and functional concept to complement the static and structural one hitherto so successful.

In respect to cerebrovascular disease, there are significant facts not readily explained in the relatively simple terms of morbid anatomy, such as the finding that in many cases of recent brain infarction no evidence of occlusion of an appropriate artery could be demonstrated, while on the other hand complete occlusion of a cerebral artery can occur without any resultant softening in the area of distribution.

The increase in knowledge of the cerebral circulation derived from angiographic studies, and the progress in recognition of the very variable clinical syndromes produced by occlusions of the internal carotid and basilar arteries underline this change from a static to a dynamic concept of disease, a change which has been responsible for the exploitation of the technical advances in the fields of cerebral surgery, neuroradiology and neurophysiology. Inevitably such an approach will likewise insure the success of neurochemical and related techniques which, more and more, are being used in neurological investigation and on which the future growth of neurology increasingly depends.

THE BRANCH OF MEDICINE that we call neurology was founded upon a careful correlation of the facts observed in the wards and out-patient clinics with the known tenets of the anatomic and later of the pathologic and physiologic principles of the central nervous system. This enabled it to get away to a flying start in the exciting period during the latter half of the last century when medicine was in transition from a craft to an applied science and was responsible for the fact that for two generations, and perhaps more, neurology was the most advanced branch of medicine and attracted to its study some of the most eminent members of our profession.

But the very qualities that made neurology attractive to those who sought to apply to medicine the principles of science impressed upon it a certain rigidity. Like a growing tree, as it became mature it became more fixed in shape, the rate of growth at the circumference slackened and the opportunities to throw out fresh branches grew less.

Fortunately, there have always been the exceptional minds that saw beyond the physical facts to

Dr. Elkington was visiting professor in the department of neurology, University of California School of Medicine, San Francisco, 1957.

Presented before the San Francisco Neurological Society, November 20, 1957.

Submitted October 28, 1958.

the principles that lay behind them. Probably the greatest of the possessors of such minds was Hughlings Jackson. His chosen raw material for study was epilepsy, but he was not interested in morbid anatomy, or in the anatomy of the normal, or even in such physiologic knowledge as was available to him in his day. He invented his own physiologic delineations as he went along, as we can see from his definition of epilepsy as "an occasional, sudden, excessive, rapid and local discharge of grey matter,"[8] or in his description of the state of a patient who suffered from focal fits beginning in one foot. He wrote, "The patient was not really well when he came to my house. He had a persistent discharging lesion presumably of a few cells in his leg centre (perhaps only some of the hallux centre); he always carried it about with him . . . a persistent, quasi-parasitical, hyperfunctional part of himself."[9] The researches of the past half century have gone far toward bridging the gap between Jackson's physiologic concepts and ours, but in the meantime his generalizations have had a profound influence on the development of neurology and, indeed on the development of medicine in a wider field.

I am inclined to think that when an unbiased judgment can be formed, Pavlov and Freud will be found to be of a stature comparable to that of Jackson, for each by an act of imagination, inspired and guided by observation, provided an explanation of abnormal behavior at a distance far removed from anything which can at present be explained on the materialistic basis of the so-called "basic sciences."

In our present time, neither has assumed his final position among the great men of medical science. The reputation of one suffers from the effects of geographical isolation; that of the other, from the excessive enthusiasm of his disciples.

But by and large neurology, in its orderly growth, has been tied to morbid anatomy and in the past 25 years the limitations of that faithful guide have become more and more apparent. If neurology is to progress in the future as rapidly as it has done in the past, it must learn to use newer methods and to replace a static concept of disease with a dynamic one. It must accustom itself to think more in terms of function and less in terms of structure.

An apt illustration of this need is afforded by the history of polyneuritis. All the resources of morbid anatomy have shown no more than the general evidence of degeneration in acute cases and of replacement and repair in chronic cases. Plenty of evidence of the crime, but of the criminal—not a trace. The gradual accumulation of such pieces of evidence as have been provided by studies of ortho-cresol-phosphate poisoning, porphyria and of certain polyneuritides in the animal world, as well as of deficiency diseases, has made it clear that the answer must be sought in terms of enzyme and electrolyte chemistry and that it is beyond the range of morbid anatomy with its present technical equipment.

This was clearly in the mind of Sir William Gowers when he wrote, ". . . its cause is the presence in the blood of some virus, often an organic or inorganic chemical compound to which the nerve fibers are susceptible, just as they are susceptible to curara."[4]

Less obviously the limitations of morbid anatomy are to be observed in respect of cerebral vascular disease. It has been customary to subdivide this group of disorders into the slow processes of degeneration brought about by progressive diminution of the blood supply to the brain on the one hand and cerebral vascular accidents on the other.

These latter consisted either of some form of hemorrhage or of softenings which were due either to thrombosis or embolism in the vessels that were called end-arteries. It was a tidy, well arranged concept that satisfied everyone, for seldom did the clinician who saw the patient during life examine the brain after death, and the pathologist who examined the brain with greater or less care according to his interests was seldom in a position to know or to assess the importance of the vagaries that the patient showed during life. At best it was an attempt to explain a dynamic situation in terms of a static pathologic observation.

As Adams[1] has written, "Pathology presents one facet of disease, an important one, for it depicts the final, irreversible and often fatal stage of a morbid process."

I take it that he here used the word *pathology* as synonymous with *morbid anatomy*, whereas I should prefer to reserve it for a wider sense, to cover all departures from normal function whether or not they are permanent or detectable by visual methods.

Now, if there is one thing that is certain about the cerebral circulation, it is that it is not static. No one who has ever seen a cerebral operation can doubt that it is in fact a surging maelstrom of activity. At each heart beat almost one-fifth of the outflow from the left ventricle passes to the brain. Although the brain makes up only 2 per cent[12] of the total body weight, it consumes 17 per cent of the glucose and 20 per cent of the oxygen used by the whole body.[10] Weight for weight it uses ten times more glucose than any other tissue in the body.

Little wonder that diminution of the rate of blood flow, either general or local, is quickly followed by

disturbances of function and, if it persists beyond a certain critical time and at more than a critical intensity, by the "final, irreversible and often fatal stage of a morbid process."

There are a number of significant facts in cerebral vascular disease that were not easily explained in the relatively simple terms of orthodox morbid anatomy. It has frequently been noted that in many cases of recent brain infarction[2] (Adams found this to be the case in 64 per cent of 128 cases of softening) even the most careful search failed to demonstrate an occlusion of the lumen in the appropriate artery. On the other hand, cases of complete occlusion of such an artery as the middle cerebral, as proved by angiography or autopsy, can occur without any resulting softening in its area of distribution. It used to be believed that the only scope for effective collateral circulation in the brain was through the anastomoses of the circle of Willis. Thanks to angiography it is now known that (at any rate in respect of the circulation over the convexities) there is a considerable anastomosis between contiguous vascular fields which rapidly increases in efficiency if circumstances call it into play, a fact that is in conformity with clinical as well as with pathological observation.

Another clinical syndrome difficult to explain in terms of a static pathologic condition is the attacks of so-called "vasospasm" or small premonitory strokes. At irregular but increasingly frequent intervals the patient experiences transitory monoplegia, hemiplegia or dysphasia, sometimes hemianopia, lasting only for a few minutes or even seconds and passing off completely until at last the defect persists and it becomes clear that the brain has been permanently damaged. In the past the most favored explanation of these episodes was that they were caused by vasospasm, in spite of the fact that direct evidence of such spasm was lacking and that the facts of the case ran counter to what was known of the rare phenomenon of spasm of the cerebral vessels when it did occur.

Proved vasospasm, such as occurs in puncture, clipping or other injuries to the vessels and in subarachnoid hemorrhage, seems to result from stimulation of the outer aspect of the vessels and is a process which only passes off slowly. It seems incredible that arteries which *ex hypothesi* are already hardened and degenerate should suddenly contract to a degree capable of causing ischemia in the tissue supplied by them and as suddenly dilate again.

Notable light has been shed on these events by the increase of our knowledge about occlusions of the internal carotid and basilar arteries that has come about in the past ten years.

The classic syndrome of thrombosis of the internal carotid artery has been recognized for generations. The sudden onset of massive hemiplegia with sensory loss and usually hemianopia and, if right sided, with aphasia, often preceded by a convulsion and followed by increasing stupor, is described in all the textbooks, which usually go on to say that blindness and optic atrophy on the side opposite the hemiplegia is rare but very characteristic when it occurs. Gowers commented on the fact that this syndrome was remarkably uncommon.

It certainly was not talked about among English neurologists and I doubt if a search of the records of the National Hospital in the 1930's would reveal a single case so diagnosed. And yet we now know that the condition is relatively common and as early as 1942 Hultquist[6] had reported that 4.4 per cent of a series of 1,300 unselected autopsies showed complete occlusion of one internal carotid artery. One must conclude that cases of the same kind occurred earlier but were unrecognized, being usually misdiagnosed as some primary form of cerebral vascular accident, particularly thrombosis of the middle cerebral artery.

For illustration, I may cite the case of an apparently healthy but tired army officer in his late 30's whom I was asked to see in about 1944. During the 48 hours before I saw him he had had about twenty attacks of transitory right hemiplegia with aphasia. These came on suddenly with stoppage of speech followed by total flaccid right hemiplegia which lasted for a minute or so and then passed off completely.

As I completed my examination, in which I had noted no abnormalities, he said, "It is coming on." He became speechless, the right side of his face became flat and the corner of his mouth drooped. The right arm, around which I still had the sphygmomanometer cuff, fell limply to his side, and his right leg was totally paralyzed. As I was taking his plantar reflexes, he said "It has gone now." His face had come to life and within seconds the strength in his arm and leg had returned to normal. It was the most dramatic thing I have ever seen at the bedside. I told my house-physician that it was for all the world as if some one had turned off a tap and then turned it on again. But I had no idea what I was looking at and when a few hours after his admission to hospital he had another attack which did not clear up but left him with a permanent hemiplegia, I still did not realize, as I do now in retrospect, that this was a truly classical case of internal carotid thrombosis. My failure to recognize it was the more reprehensible for in 1914 Ramsay Hunt[7] wrote an excellent paper on the subject,

coining the appropriate phrase "cerebral intermittent claudication."

In England it was the development of cerebral angiography that demonstrated the relative commonness of carotid occlusion or stenosis. We now know that the so-called "classical syndrome" is an uncommon way for carotid thrombosis to present itself. In many cases the process takes place without the brain's being damaged, even without the patient's experiencing any symptoms, and the condition is found unexpectedly by angiography or at autopsy. Here it must be assumed that the collateral circulation through the anterior and posterior communicating arteries has been sufficient to maintain an adequate blood flow through the peripheral distribution of the occluded carotid.

More often the clinical picture is one of recurring transient episodes of disturbed function of the parts of the nervous system nourished by the defective artery.

Of these episodes, sudden numbness or weakness of the hand or the side of the face is the commonest. It usually occurs on the right side—for some reason the left carotid artery is affected about three times as often as the right—and it is then accompanied by disturbance of speech. Attacks of dysphasia may occur alone or the hemiparesis may spread to the leg, and although it is transient, it may be severe. The patient may feel faint during these attacks and occasionally convulsions, either focal or general, follow the premonitory "feeling." Unilateral headache is common. Occasionally attacks of transitory blindness occur in the eye on the same side as the diseased artery. These incidents may recur at intervals over a long period and may remain the only evidence of carotid occlusion or they may eventually be followed by hemiplegia, usually of sudden development.

Occlusion of the basilar artery has much in common with that of the carotid both in its history and in its pathologic and symptomatologic manifestations. Reading the literature on the subject, one might think that the condition was unknown until 1946. This is not correct, as the following quotation will show:

> ". . . In occlusion of the whole basilar the limbs of both sides are usually affected, sometimes at the same time, sometimes successively in the course of a few days. The limbs on one side, for instance, may become weak and improve; a day or two afterwards the other side becomes weak, and then there is again loss of power in the side first affected. The affection of the facial or fifth nerves may present the same variations, and often does not correspond to the affection of the limbs. There is usually considerable impairment of articulation and of swallowing. Loss of the conjugate movement of the eyes, from palsy of external and internal recti, is occasionally observed, with or without palsy of the facial nerve on the side of the affected external rectus. This, however, less frequently results from softening than from tumor. When the obstruction involves the upper part of the vessel, as is usually the case in embolism, there are usually ocular symptoms other than the conjugate deviation, ptosis, contracted or dilated pupils, with loss of reflex action to light, sometimes transient. There is occasionally paralysis of the whole or part of one third nerve, or even of both. Less common is hemianopia, from extension of clot along one posterior cerebral beyond the origin of the posterior communicating artery. Bilateral loss of sight, theoretically possible, is excessively rare. Obstruction of the lower extremity of the basilar is not common, except as the result of the extension of a clot from one of the vertebral arteries. The onset of obstruction of the basilar is usually attended with a distinct apoplectic seizure, usually transient; it often recurs, and gradually deepens. The patient may lie for some days in a state of incomplete coma, can be roused to open his eyes, but does not speak. Convulsions occasionally attend the onset, but are on the whole not frequent; they may be general or partial; one limb or one side of the face may escape. Rigidity or clonic spasm in the legs or arms is much less common than in hemorrhage into the pons."

This quotation is not taken from some obscure paper of the 1930's but from the American Edition of Sir William Gower's *Textbook of Neurology*,[5] published in 1888. It is a piece of descriptive writing of high quality and little can be added to it as regards the picture of the sudden occlusion of the basilar trunk by massive thrombosis or embolism, although we may note that severe headache is a common additional symptom.

The value of Kubik and Adams' paper[11] which was based on a careful clinicopathological analysis of 26 cases of basilar thrombosis in which autopsy was done, did not consist in the description of the fully developed syndrome, accurate though this was. It added very little to our knowledge of the picture of the final catastrophe, but it made it clear that many of these patients had had premonitory symptoms over a considerable period which were sufficiently characteristic to be recognizable for what they were.

Amongst these transient symptoms one may especially mention numbness of one side or both sides of the face, diplopia, giddiness—usually consisting of a feeling of disequilibrium but sometimes mounting to true vertigo, tinnitus, staggering gait, numbness and weakness of one arm or leg or the whole of one side of the body. Episodes of dysarthria or of dysphagia may occur. All these symptoms can be related to sudden, transitory disturbances of function in the brain stem. Even more characteristic when they occur are the brief attacks of hemianopia or of complete loss of vision which result when the circulation fails in one or both posterior cerebral arteries.

What is the explanation of these sudden transient episodes that are so characteristic of occlusion both of the carotid and basilar arteries?

The three arteries are very comparable in size and are similarly affected by disease processes. Leaving aside the effects of trauma and of massive embolism, both of which are likely to produce sudden total obstruction with disastrous results, the essential cause of occlusion is atherosclerosis. In arteries of wide caliber this gives rise to an occlusion of gradual development. Narrowing of the lumen and tortuosity are the first stage. followed by the gradual formation of clot at the periphery that then encroaches more and more upon the lumen. Pathological examination often shows the clot to be laminated with recanalization at the periphery and a narrow central channel.

One must suppose, therefore, that in such cases the blood flow is not suddenly cut off but gradually reduced to a sluggish stream which may or may not be finally cut off altogether. But in either case time has been given for the maximal development of the collateral circulation.

In the transitory episodes that I have been talking about, it seems most unlikely that anything fresh has happened in the thrombosed artery. at any rate in its diseased portion. The incidents are far too brief for this.

The explanation most often advanced has been that of spasm in the peripheral branches of the diseased artery, and for reasons I have already mentioned this seems to me to be a wholly unsatisfying explanation. One must look further afield.

Supposing that the left internal carotid artery is obstructed, the maintenance of the blood flow in its peripheral branches is dependent upon an adequate inflow from the anterior and posterior communicating arteries. If there is a reduction of this—say of 20 per cent—such as might easily result from comparable disease processes going on in them or even in the right carotid or the basilar, then the brain tissue to suffer first might well be that supplied by the left carotid, and particularly by its most tenuous branch, the middle cerebral. But such a process would not account for the intermittency of the attacks.

A simple analogy will readily occur to the mind of anyone who has ever lived on the fourth floor of an English home. Your bath tap is running nicely and someone turns on the tap in the kitchen. The bath tap ceases to run. There is no obstruction. Nothing fresh has happened. This incident has no morbid anatomy. There was simply not sufficient head of pressure to go round. The kitchen tap is turned off and the bath tap flows again as if nothing had happened.

Surely, some comparable event is the most likely explanation of the incidents we have been considering. We tend to think of the general circulation as a constant, but it is not so. Every change in our posture, a meal, a brisk walk must call for a redistribution of the available blood.

Anyone who makes a practice of taking the blood pressure must know how rapidly and widely it fluctuates under what appear to be constant conditions. What happens if we have a run of extra systoles or a fit of coughing or if we give blood for a transfusion or have an attack of diarrhea, to quote two examples mentioned by Denny-Brown[3] in connection with cases of basilar occlusion?

It seems, therefore, that we must consider the cerebral circulation as a whole rather than in parts, as a constantly fluctuating stream broken up into many parts where what is happening in any one channel is as much dependent upon what is going on in the circulation as a whole, as upon the local conditions in that channel itself.

If I am right in my contention that we need to cultivate a more dynamic attitude toward disease, can we gain any guidance for the future? I believe that we can. Is it not possible that what is true of cerebral vascular disease is equally true of multiple sclerosis? May not what applies to polyneuritis apply equally to motor neurone disease?

The development of neurology might be compared to the ascent of a mountain valley. At first the valley is wide, the slope is gentle and there are flowers for the gathering wherever the eye turns. Those days are long since passed.

The valley gradually narrows and grows steeper. There are still a few flowers to be found but they need looking for and are usually hidden in the rocks.

Finally one is faced by a circle of precipices that can only be scaled by using special techniques. That is where we are today. The progress of knowledge in neurology now goes forward in jerks and pauses. A new technique is developed which brings a spurt

of progress and then, as its force is spent, progress gradually slows again until the next new technique is discovered.

In my time the greatest technical advance has unquestionably been the development of cerebral surgery, and although its rate of advance is slowing, it has still not spent itself as a means of advancing knowledge. The next most important advance has been neuroradiology which in the past twenty years has completely transformed practical neurology. Electroencephalography has so far proved rather a disappointment and seems to me to have added little of fundamental importance to our knowledge. Its present methods are too crude to analyze the intricacies of the nervous system, and our knowledge of the anatomic and physiologic features of the brain is too elementary to enable us to use the available methods to advantage. But Adrian's work has shown that when the method and the problem are suitably matched to one another, fundamental problems can be solved by the techniques of electrophysiology.

To my mind the technique most likely to give neurology its next forward impulse is chemical analysis. The study of brain metabolism can hardly yet be said to be in its infancy—it is still embryonic. But surely when it is fully developed it will be found to contain the answer to many of the problems which at present seem insoluble.

And who shall say what other techniques at present in an early stage of development, such as electron-microscopy, tissue culture and isotope chemistry, and others still unthought of, will be brought to bear on our unsolved problems during the next twenty years. And when each of them has been fully exploited one suspects that there will still remain, inviolate, the unbridged gulf between the mind and the body.

A practical difficulty which neurology, in common with all other branches of medicine, must find a means of resolving is how, on the one hand, to keep clinicians sufficiently in touch with developments in the basic sciences to enable them to employ them fruitfully and, on the other hand, to give scientists sufficient insight into clinical medicine to enable them to see where their technical advances can usefully be applied.

The National Hospital, Queen Square, London.

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Phenethylbiguanide in Diabetic Patients

Clinical and Metabolic Effects

THOMAS H. LAMBERT, *M.D.*, La Jolla

• **Phenethylbiguanide (DBI) was given to 70 unselected but not obese diabetic patients who were receiving restricted diabetic diets. The only side effects attributed to the drug were anorexia, nausea, vomiting and diarrhea in 28 patients. These symptoms subsided with reduction of dosage. No evidence of serious toxicity has been demonstrated in clinical and metabolic studies. In 27 of the 70 patients diabetes was controlled adequately with DBI alone, and more stable control was obtained in 11 labile diabetics who received DBI in combination with insulin.**

The mechanism of action is not definitely known.

A NEW nonsulfonylurea, hypoglycemic compound discovered recently by Ungar[1] has stimulated further the investigation of effective oral substitutes for insulin in the treatment of diabetes mellitus. This new synthetic drug, N'-betaphenethylformamidinyliminourea hydrochloride (hereafter referred to as DBI) has been reported as an active, potent, hypoglycemic agent, effective in certain animals[8,9,10] and in patients[2,3,6,7] with diabetes mellitus.

The purpose of the studies herein reported was to observe the effects of DBI in 70 diabetic patients. A definite diagnosis of diabetes mellitus had been established previously in all patients of this series. There was careful dietary regulation in each case and none were obese. Administration of insulin had been necessary for adequate control in 59 patients, and control of the 11 patients not taking insulin was unsatisfactory after periods of observation on a restricted diabetic diet alone.

Seventy known diabetic patients, including juveniles and patients with complications such as Kimmelstiel-Wilson's syndrome and osteomyelitis, were studied for periods of from seven days to sixteen months. Fifty-three of these patients were in hospital and 17 were observed as out-patients. Diets were constant and weighed. Before therapy was started these patients had the following studies: Electrocardiogram, blood cell counts, urinalysis, determination of protein-bound iodine, phenolsulfonphthalein test (intravenous), blood urea nitrogen, total cholesterol determination, Bromsulphalein, cephalin flocculation and thymol turbidity tests and determination of total serum bilirubin. During therapy these examinations were repeated at various intervals. Capillary blood glucose determinations, by the Somogyi-Nelson method, were made fasting or three hours after breakfast and lunch. Urine glucose was determined by the Benedict method, at 7:30 a.m., 11:00 a.m., 3:00 p.m. and 9:00 p.m., and 24-hour excretion of glucose was measured for each in-patient and for seven out-patients.

There were 34 males and 36 females in the series. The age range was from 6 to 84 years, the average 53 years. The duration of diabetes was from one year to 29 years, and the average was 10.6 years.

All patients were maintained on a restricted diabetic diet during the period of observation, and criteria for control established previously by Lambert and co-workers[4] were used to determine adequate control during observation. These criteria were as follows:

1. Three-hour postprandial "true" blood sugar levels* of less than 150 mg. per 100 cc.
2. Reasonable 24-hour urinary excretion of sugar (that is, less than 7 gm).
3. Prevention of ketosis.
4. Absence of symptomatic hypoglycemia.
5. Tolerance of drug without toxicity.

RESULTS AND REPORT OF CASES

Successful treatment on DBI alone has continued for 27 patients, and 11 patients have maintained more stable control on a combination of DBI and insulin. Administration of DBI was discontinued in 12 patients, even though they had adequate control, because of side effect. Two well regulated patients moved to areas where careful observation was not possible. In 18 patients there was no demonstrable blood sugar lowering effect.

Chart 1 demonstrates the effect in a 40-year-old man with diabetes of one year's duration. His weight was 145 pounds and he had not had adequate control on a restricted diabetic diet with 20 units of insulin daily. Insulin was discontinued for

From the Scripps Clinic & Research Foundation, La Jolla.
Submitted December 2, 1958.

*"True" blood sugar level of 150 mg. per 100 cc. is equivalent to 180 mg. per cent Folin-Wu value of criteria previously established.

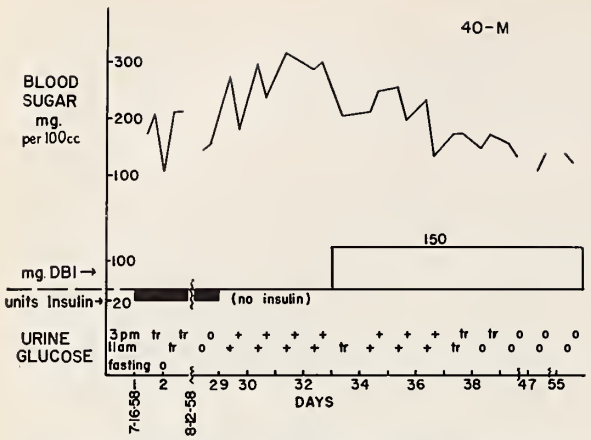


Chart 1.—Diabetic control with 150 mg. of DBI daily in a 40-year-old man after insulin was withdrawn for 4 days (tr. = trace).

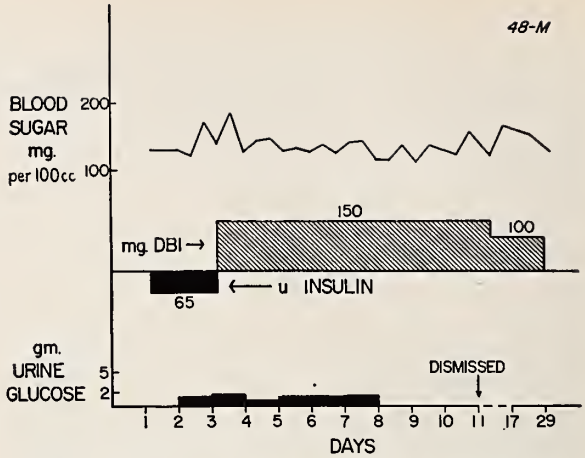


Chart 2.—Effect of DBI in adequate regulation of diabetes aggravated by osteomyelitis.

four days, with a resulting hyperglycemia and glycosuria, before the administration of DBI.

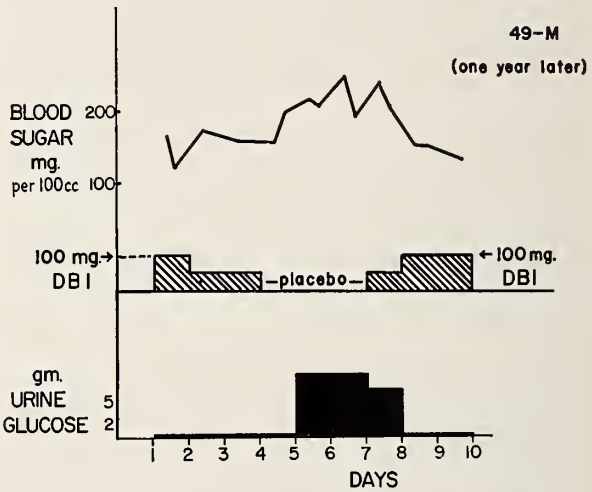
Chart 2 shows the control in a 48-year-old man with osteomyelitis of the right foot. In this patient diabetes was of seven years' duration and his weight was 153 pounds. He had required 65 units of insulin daily. Adequate control was obtained with 150 mg. of DBI daily, and eventually with 100 mg. After one year the osteomyelitis had subsided and in Chart 3 is shown the result of substituting a placebo for DBI: Hyperglycemia and glycosuria became evident and DBI was resumed.

Chart 4 shows the effect of DBI alone in a 14-year-old boy with known diabetes for one year. Nausea developed with the dose at 150 mg. per day, and DBI was discontinued after six days because of ketosis.

The response to combined therapy of insulin and DBI in a 50-year-old, brittle diabetic woman weighing 112 pounds is shown in Chart 5. Diabetes in this case was of 24 years' duration. She had been observed while receiving a constant, weighed diabetic diet plus insulin for three weeks before trial of combined DBI and insulin therapy. The diabetic condition has remained stabilized.

The patients in whom DBI alone gave adequate control of diabetes were 40 years of age or older, the range being from 40 to 73, with an average of 60.9 years. Daily insulin requirements of patients taking insulin in this group were 15 to 65 units and the mean was 28.5 units.

The average daily excretion of sugar for patients in whom diabetes was well controlled by insulin therapy was 2.6 gm; the range was from 0.6 to 6.5 gm. The average daily excretion when they were receiving DBI was 1.7 gm., and the range 0.6 gm. to 5.9 gm. Dosages of DBI varied. At first, adults were given 150 mg. and children 75 mg. in divided



3. Chart 3.—Demonstration of long term control of diabetic condition of same patient shown in Chart 2. Maintenance therapy with 100 mg. DBI daily for one year preceded placebo of 4 days.

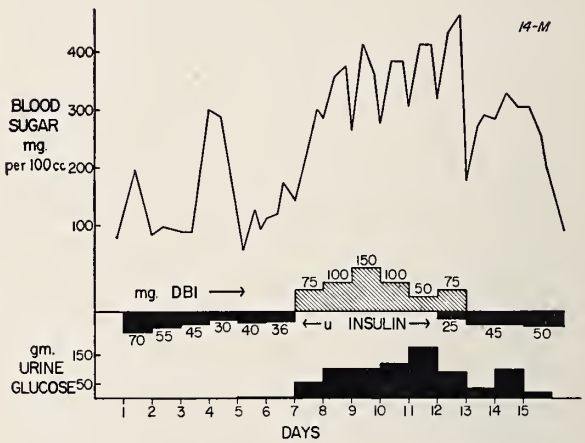


Chart 4.—Ineffectiveness of DBI alone in juvenile diabetic. No response in 14-year-old boy with dosage up to 150 mg. daily.

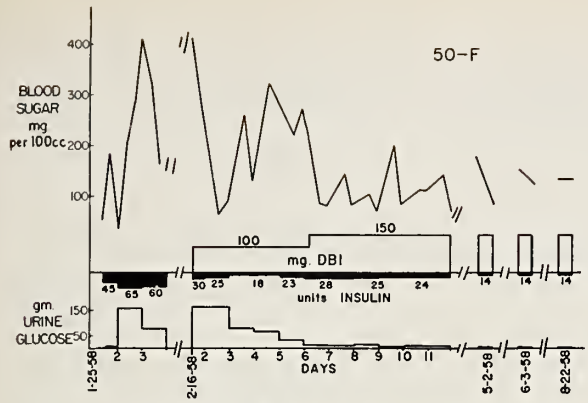


Chart 5.—Stabilizing effect of DBI in combination with insulin in adult labile diabetes.

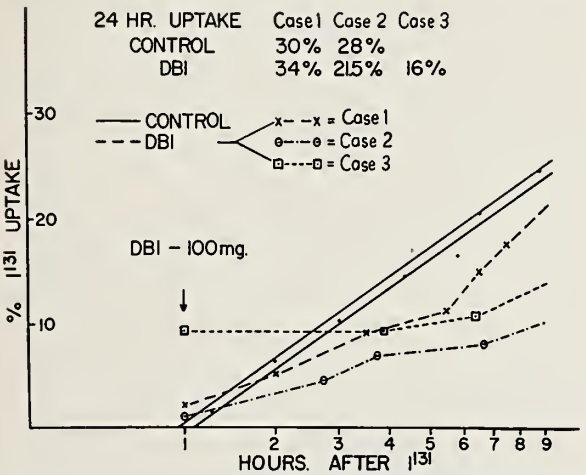


Chart 6.—Temporary effect of DBI in suppressing iodide uptake by the thyroid gland. The solid lines represent the control radioiodine uptake in these patients before the administration of a single dose of 100 mg. of DBI. The broken lines demonstrate the acute effect of DBI upon iodide accumulation by the thyroid in these three patients.

doses daily. Doses as high as 300 mg. were administered before nausea occurred. The patients who had adequate control while receiving DBI required 50 mg. to 225 mg. of the drug daily; the average was 114 mg.

No impairment of liver or kidney function was detected after the administration of DBI, and no changes were observed in repeated hematological studies.

Changes in electrocardiographic tracings of three patients were noted after long continued administration of this hypoglycemic agent, but it was not determined that these effects were due to DBI. There was no significant effect on the electrocardiograms of four patients who had hourly examinations after a single dose of 100 mg. of DBI. Six patients in whom serial determinations of radioactive iodine accumulation were carried out while they were receiving DBI, showed suggestions of moderate, intermittent reductions of iodide accumulation by the thyroid for four to five hours after a single dose of the drug. This effect in three of these patients is shown in Chart 6. The 24-hour I^{131} uptake of two patients was decidedly depressed after two weeks of treatment with the compound, but returned to normal range after four weeks without discontinuance of DBI therapy.

There were no significant changes in the 17 hydroxycorticosteroids in the urine of six patients after they had taken DBI for from two to four weeks.

Fasting control values for serum sodium, potassium, chloride, calcium, phosphorus, bicarbonate and lactic acid were determined for five patients after three days of constant weighed diets, and these determinations repeated after three days of DBI therapy on the same diet. Similar studies were done on 24-hour urine volumes. No appreciable effect on the balance of sodium, potassium, chloride or bicarbonate was noted. Blood lactic acid was elevated in one patient and minor changes in phosphorus balance occurred in three patients.

COMMENT

In the present series of 70 diabetic patients a restricted diabetic diet was maintained before therapy with DBI was begun. They had been observed while being treated by diet alone or diet plus insulin. In some instances, insulin had been discontinued before treatment with DBI and in others DBI was discontinued during treatment, with hyperglycemia and glycosuria resulting in either case.

There was adequate control with DBI alone in 27 patients. Ten of this group had anorexia, nausea, vomiting or diarrhea within the first one or two weeks of treatment. These symptoms disappeared with continuation of DBI in some cases, and with reduction of dosage temporarily in other instances. Thirty-seven of the 70 patients had side effects of this kind. In nine of these patients, either brittle adult or juvenile diabetics, these side effects were attributed to ketosis which was evident as early as 24 hours after DBI was first administered. The side effects experienced by the other 28 patients were attributed to irritation of the gastrointestinal tract or to some unknown cause. Whether the DBI tablets were given before, during or after meals made little difference so far as side effects were concerned, and antispasmodics or antacids taken before or after the drug did not ameliorate these unpleasant and annoying symptoms.

Nine of the patients in whom control of diabetes was obtained with DBI alone or in combination with insulin, who had side effects during the first weeks of therapy with DBI but were able to continue treatment, showed a temporary reduction in weight of

as much as two to seven pounds. By maintaining their required daily total caloric intake, all returned to their standard weight without discontinuance of DBI treatment.

There was a definite hypoglycemic action of DBI and evidence of adequate control in ten patients who discontinued the drug because of nausea and vomiting. Two juvenile and nine adult labile diabetic patients obtained better control with DBI combined with insulin than with insulin alone. Insulin dosages were reduced 50 per cent in some instances.

The suggestion of antithyroid activity of DBI demonstrated by the I^{131} accumulation gradients of six patients and depression of 24-hour I^{131} uptake in two patients cannot be explained adequately. Experimental data[1] points to peroxidase as probably the enzyme that brings about the oxidation of iodide to iodine, and it is possible that phenethylbiguanide may inhibit a reaction catalyzed by peroxidase.

The mechanism of action of DBI has not been established. However, recent studies by Wick[5] and co-workers with radioactive phenethylbiguanide (DBI) showed that this compound, when administered to rats, accumulated in the gastric juice and the liver almost to the exclusion of other tissues. These findings tend to support the previously suggested hypothesis of Wick[11] that the most important site of action of DBI is in the liver. DBI has been shown to inhibit the oxidation of succinate in vitro,[12] which could lead to an increased rate of glycolysis and lactate formation in the liver. The lactate released into the blood from this action of DBI could be readily oxidized by muscle tissue.

476 Prospect Street, La Jolla.

ACKNOWLEDGMENTS: Grateful acknowledgment is made to Dr. Louis Freedman of the U. S. Vitamin Corporation for supplies of DBI; to Dr. Lester Van Middlesworth for his technical assistance in preparation of the I^{131} accumulation gradients.

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Hypophysectomy for Palliation of Breast Cancer

With Especial Reference to Surgical Technique

NORMAN L. COBB, *M.D.*, San Diego, and
WILLIAM B. SCOVILLE, *M.D.*, Hartford, Connecticut

• **In a series of 19 patients who had hypophysectomy for palliation of cancer of the breast, all had striking relief of pain. Objective evidence of remission of disease was observed in ten patients.**

The survival time after operation averaged 19.8 months for patients who had remission and 2.1 months for patients who did not.

Results were better in patients who had had cancer for a long time before operation than in those who had had the disease a relatively short time. Also it was noted that results were better in patients who had had preoperative response to endocrine therapy than in those who had not. Hence these factors may be considered in selection of patients for hypophysectomy.

SUCCESSFUL total hypophysectomy was probably first performed in 1951 by Olivecrona[2] in Sweden, who operated on a 30-year-old man with diabetes mellitus. Later, Luft and Olivecrona reported on a series of hypophysectomies, including nine which were done on patients with cancer of the breast, some of whom showed definite improvement.[3] Soon after the publication of Olivecrona's first series, Ray and Pearson in New York began an objective study of the effects of hypophysectomy on neoplastic disease and the endocrine system. In a series of 74 women with advanced cancer of the breast, 67 survived and 36 of them (53.7 per cent) had remission.[6] For those with remission the average survival of 9.3 months compared with 4.4 months for those who had no remission.*

It has been known for some time that endocrine treatment of metastatic cancer of the breast induces remissions in about half the cases. Just why tumors in premenopausal women respond to testosterone and those in postmenopausal respond to estrogens has never been adequately explained. Luft's interpretation was that the phenomenon involved the inhibitory action of the estrogens on the hypophysis.[4] Pearson and co-workers reported stimulation of cancer growth by beef pituitary somatotropin in a patient who had had a regression of tumor growth for three months after hypophysectomy.[5] Therefore, as Luft has stated, "The purpose of hypophysectomy is two-fold: First, to achieve a complete sex hormone control by elimination of the gonadotropic and adrenocorticotropic hormones, and, secondly, to eliminate other pituitary hormones which are, or can be, associated with the growth of cancer of the breast and prostate."[4]

Material

Selection of the 19 patients in whom the authors carried out hypophysectomy was based on the experiences of Ray and Pearson who looked upon patients with intracerebral or extensive liver metastasis or pronounced cachexia as too poor risks and as having too limited a life expectancy to warrant operation.

Surgical Technique

Refinements in technique that have been evolved over the past three years have immensely facilitated complete removal of the pituitary gland, especially in patients with brain edema or prefixed chiasms. The position advocated by Shelden and coworkers (cited by Freshwater and associates[1]) is recommended: A prone position with blanket rolls on either side of the thorax, the neck sharply extended and the cheeks resting on bilateral cup head rests with the body well strapped down by multiple adhesive strips and the feet resting on a fixed footrest so that the table may then be inclined to a 45 degree angle, putting the patient's face and forehead in a vertical plane directly facing that of the operator. This position results in an almost complete emptying of venous spaces around the sella. It also permits a better view of the sella and pituitary stalk. With the patient under intratracheal trilene-nitrous oxide anesthesia, a transverse incision is made at the hairline of the scalp to obtain subperiosteal exposure of the frontal bone. With a 1½-inch trephine placed so that one edge is slightly over the midline, in order to approach the sella as close to the falx as possible, a bone button is removed.

From the Department of Neurological Surgery, Hartford Hospital, Hartford, Connecticut.

Submitted September 2, 1958.

*Ray has now carried out hypophysectomy in more than 200 patients, accumulating a great knowledge of the effects of this operation on breast cancer growth and on other endocrine dysfunctions; and he continues of the opinion that hypophysectomy is the treatment of choice in the majority of cases of metastatic breast carcinoma. He believes this treatment may well replace other forms of endocrine operation and medication.[7]

(The author formerly used bilateral supraorbital 1½-inch trephine exposures on either side of the frontal sinus, permitting visualization of both walls of the sella turcica, but direct traversal of the frontal sinus, as recommended by Ray, is simpler and quite satisfactory.)

An effort is made to keep intact the mucous membrane by packing the area below the bone button with strips of Gelfoam. There appears to be little danger of permanent rhinorrhea or infection with this approach; it has been used by one of the authors (WBS) many times in fractional undercutting lobotomy procedures. The sella is approached directly alongside the falx, the procedure usually involving sectioning one olfactory nerve after incising the tip of the dura in an inverted T incision, retracting the frontal lobe upward and inserting a thin metal "tunnel" retractor as advocated by Shelden and Pudenz. The tunnel retractor consists of a thin sheet of lead or aluminum cut in the shape of a trapezoid and bent to form three sides of a tunnel which is then slid in along the roof of the orbit holding the frontal lobe away from the floor. It permits adequate visualization of the optic chiasm. A parallel beam headlight is advocated for viewing the depths of the exposure.

With the area exposed, the pituitary stalk is identified and cut close to the diaphragm sella in order to lessen the degree of postoperative diabetes insipidus. The diaphragm sellae is then torn (rather than incised in a cruciate fashion by use of a nerve hood and "cutting" current) to expose the pituitary gland. Should there be a prefixed chiasm, as there is in about one-third of the cases, the space between the chiasm and tuberculum sellae is too narrow to permit good visualization of the pituitary gland. To meet the situation, after reflecting the dura by means of a T incision, the bone of the posterior tuberculum sellae and the anterior wall of the sella turcica are removed with a dental chisel, unroofing the sphenoid sinus and its septum. The mucous membrane is pushed downward with Gelfoam packing and muscle stamps; the optic nerves are elevated by inserting cotton pads under them; the diaphragm sellae is torn open and the circular sinus and anterior dural wall of the sella are coagulated and incised, thereby both unroofing and unwalling the sella turcica anteriorly and exposing the pituitary gland transsphenoidally and anteriorly.

When the pituitary has been thus exposed from above and, if necessary, anteriorly, it is freed in its cavity by use of blunt angled pituitary dissectors developed by Olivecrona, and an effort is made to remove it whole by packing cotton pads around and underneath it, causing it to extrude en masse. Frequently, however, this is impossible and it is necessary to use the sharp angled pituitary ring curets, developed by Ray, for piecemeal removal. The lateral, posterior and anterior dural walls of the sella are thoroughly scraped and in some cases even removed. Bleeding from the cavernous sinus is easily stanched by Gelfoam. With such thorough removal of all contents under direct vision, we have not used Zenker's solution to kill remaining gland cells, although other surgeons commonly inject it into cotton pads within the sella, using suction at the same time to prevent contact with the optic nerves.

TABLE 1.—*Operative Morbidity in 19 Cases After Hypophysectomy*

	Number	Per Cent
Diabetes insipidus	19	100
Rhinorrhea	7	36.8
Optic nerve injury	2	10.5
Convulsions (first postoperative day)	1	5.3

This detailed account of technique is given because total removal of every fragment of pituitary gland, although most difficult, is most necessary for therapeutic benefit. Even with meticulous technique, nests of pituitary cells may sometimes be observed microscopically in the dural lining of patients who die. In the process of closing the wound, Gelfoam is placed in the sella, muscle stamps are left in any opening made in the sphenoid sinus, the "tunnel" retractor is removed so that the frontal lobe can again make contact with the floor of the anterior fossa, the dura is closed loosely, the bone button is replaced without wiring and covered with a layer of thinnest tantalum mesh for cosmetic reasons, the frontal flap is closed and a new type of Ace sponge rubber 3-inch bandage is wrapped snugly overlying the supraorbital flap in order to prevent eyelid edema. Rhinorrhea for two or three days is not uncommon, but in no case in the author's series did it continue for longer than five days.

The preoperative and postoperative management has been thoroughly discussed by other observers.[3,4,5,6] In this series the therapy outlined by Ray and Pearson[6] was followed.

There was one death in the series attributable to operation. This was in a difficult case in which the hypothalamus was traumatized. The patient was in coma postoperatively and died in coma on the 23rd postoperative day. Data on operative morbidity is shown in Table 1.

Results and Comment

Three patients had unsuspected metastatic cancer in the pituitary gland. In each of these patients, removal of the gland caused exorbitant bleeding.

All the patients had striking subjective relief of pain postoperatively, appreciably lessening their need for narcotics. Of the 19 patients, ten showed

some objective evidence of remission of disease. Five of the 19 patients were still living, from one to six months after operation, two of them asymptomatic, two improving and one regressing. Twelve patients had had endocrine therapy or oophorectomy before hypophysectomy, five without relief. The seven who were helped by those means were also helped both objectively and subjectively by hypophysectomy (Table 2). Of the five not benefited by endocrine therapy or oophorectomy, one had relief of pain without objective changes after hypophysectomy and one had objective improvement as well. This tends to suggest that a trial of hormones might be of value in selecting patients for hypophysectomy.

Luft and Olivecrona said that they observed no favorable response in women over 60 years of age. Ray and Pearson reported benefit in several women above that age.[6] Of two women over 60 years of age in the present series, one had a fair result and the other showed no improvement.

The length of time the disease existed before hypophysectomy seemed to be related to the survival time (Table 3) after operation. Patients in whom remission occurred had had cancer for an average of 4.9 years before hypophysectomy, and those without remission had had the disease an average of 2.7 years. As did other investigators, we attempted. without success, to find some correlation between the results of hypophysectomy and other factors such as age of the patient, tumor cell type, response to x-ray therapy and extent of disease.

2850 Sixth Avenue, San Diego 1 (Cobb).

TABLE 2.—*Data on Relation of Results of Hypophysectomy to Preoperative Endocrine Therapy and Oophorectomy*

Treatment	Total	Improved by Therapy	Posthypophysectomy Remission
Endocrine alone	9	4	4
Endocrine and oophorectomy	3	3	3
Total	12	7	7

TABLE 3.—*Survival After Hypophysectomy*

	Number	Average Survival	Still Living
With remission	10	19.8 months	4
Without remission	9	2.1 months	1

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Survival in Acute Myocardial Infarction

Factors Observed in 318 Patients

EDWARD E. HARNAGEL, *M.D.*, VACLAV V. JELINEK, *M.D.*,
ANDON A. ANDONIAN, *M.D.*, and CLIFFORD W. ULRICH, *M.D.*, Los Angeles

• Factors influencing survival in a group of 318 cases of acute myocardial infarction were analyzed.

The mortality rate for the entire series was 41 per cent. Among the men it was 39.5 per cent; among women, 44.4 per cent. The mortality rate increased with the age of the patient. Twenty-six per cent of all deaths occurred within the first 24 hours, 44 per cent within 72 hours, and 71 per cent within the first week following hospital admission.

Increased mortality rate was associated with previous history of congestive failure, myocardial infarction, hypertension or cardiomegaly. As to circumstances immediately preceding an infarction, the only ones that seemed to be related to a high mortality rate were hemorrhage and the postoperative state. Not only the presence but the degree of shock, congestive failure, cyanosis and dyspnea adversely influenced chances for survival. Duration, location, radiation and number of attacks of pain did not appear to be associated with extraordinary mortality rates. Anterior was slightly more common than posterior infarctions, and the mortality rate was much higher. Thromboembolic complications and certain disorders of rhythm and of conduction definitely worsen prognosis.

Comparison of average mortality data as reported in different studies on acute myocardial infarction is improper and misleading because of the great differences between the kinds of patients included in various series reported upon. A standard method of grading the severity of acute myocardial infarction would help toward sounder comparisons.

THE PRESENT STUDY is an analysis of factors which appear to influence mortality in acute myocardial infarction. It is based on data on 318 patients admitted to the California Hospital between the years 1949 and 1951, inclusive, in which the diagnosis could be established by unequivocal electrocardiographic evidence or by autopsy findings.

Of the 318 patients, 228 were men, 90 women. The age range was from 33 to 86 years (average 61); 83 per cent were 50 to 80 years old and about a third were 60 to 70 years old. The average age of the men was 60 years, and nearly half of them were younger. For the women the average age was 65.5 years and only a fourth of them were less than 60.

Mortality

The difference between the sexes in hospital mortality was not great—39.5 per cent for the men, 44.4 per cent for the women. The average for the series was 41 per cent.

Death rates on certain days following hospital admission are presented in Chart 1. Of 284 patients who survived the first 24 hours, 96 (33.8 per cent) died subsequently. Of the patients surviving the third day, 30 per cent died. Only 25 per cent of patients alive on the fifth day died during the time they were in hospital. Among those alive at the end of the first week, the mortality rate was only 16 per cent, and among those who survived the second week it was only 6 per cent. In other words, the mortality rate among the survivors decreased sevenfold within the first two weeks. It would appear that chances for recovery improved steadily with each day of survival after acute infarction.

While Chart 2 clearly indicates increase of mortality with age, there is also a suggestion—scanty though the data are—that in the fourth and fifth decades the mortality following myocardial infarction is higher in men than in women, while in the ninth decade this situation is reversed.

This work was supported by a grant from the Moore-White Medical Foundation.

Submitted July 8, 1958.

Previous Illness

In agreement with other investigations, the data in Table 1 disclose a mortality of 61 per cent among patients who had had congestive failure—nearly twice as high as among the others. Mortality was likewise high following previous myocardial infarction and among patients with hypertension. Angina, obesity and diabetes mellitus did not appear to influence mortality in this series of cases.

Of the circumstances immediately preceding infarction which are listed in Table 2, only surgical operation and massive hemorrhage (usually gastrointestinal) appear to influence the outcome. Because of the small number with these complications, the

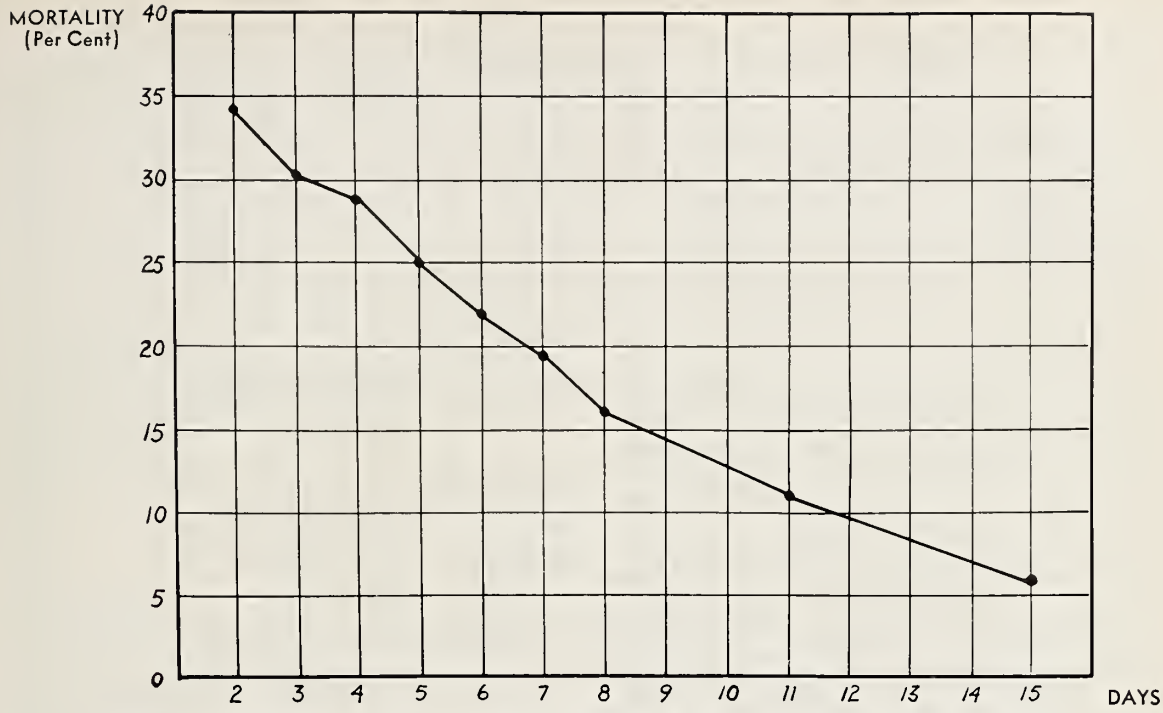


Chart 1.—Progressive decrease in mortality among survivors of acute myocardial infarction.

mortality rate associated with them—75 per cent—is not conclusive. Most infarctions occurred in patients at rest, and for these the mortality was practically the same as for the entire series, while the mortality rate associated with attacks following exertion was lower.

Signs and Symptoms During Hospitalization

Relationship of certain signs and symptoms to mortality is considered in Table 3. Our findings indicated that shock is an important factor — the greater the degree of shock, the poorer the prognosis. Fifty-two per cent of the patients in the series did not go into shock; in that group the mortality rate was 23 per cent. The mortality rate for patients in mild shock, moderate shock and severe shock was 32 per cent, 61 per cent and 84 per cent, respectively.

Not only the presence but the degree of congestive failure, too, influences outcome. The mortality rate among patients in whom congestive failure did not develop (54 per cent of the series) was only 21 per cent. With mild failure, the mortality rate was 23 per cent; with moderate failure, 70 per cent; and with severe failure, 83 per cent.

Cyanosis, particularly in moderate or severe disease, appears to be an ominous sign. This condition developed in 39 per cent of the patients in this series. In 12 per cent the cyanosis was mild; in 18 per cent, moderate; and in 9 per cent, severe. Mortality rates were 46 and 60 per cent in patients mildly and moderately cyanotic and 82 per cent when the degree of cyanosis was severe.

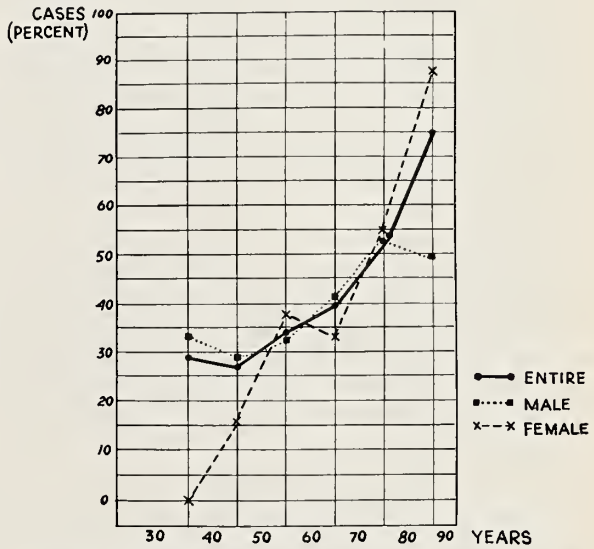


Chart 2.—Relation of age to mortality among 318 patients and for each sex.

Mortality rates associated with mild, moderate and severe degrees of dyspnea was 31 per cent, 54 per cent and 76 per cent, respectively. These observations are in general agreement with those of Rosenbaum and Levine,[10] who reported a mortality rate of 41 per cent in patients with dyspnea, in contrast with 18 per cent in patients with myocardial infarction without dyspnea.

TABLE 1.—*Presence or Absence of Certain Illnesses Before Acute Myocardial Infarction—Incidence and Relation to Mortality*

	Number of Cases	Illness Present		Illness Absent	
		Incidence (Per Cent)	Mortality (Per Cent)	Incidence (Per Cent)	Mortality (Per Cent)
Congestive heart failure	288	24	61	76	31*
Previous infarction	271	23	54	77	36†
Hypertension	294	27	52	73	35‡
Angina pectoris	286	51	37	49	38
Obesity	301	39	45	61	38
Diabetes mellitus	292	9	42	91	39
Vascular disease	292	16	50	84	38
Renal disease	295	12	51	88	39

*Significant at 0.1 per cent level. †Significant at 1 per cent level. ‡Significant at 5 per cent level.

Reliable information on cardiac size—based on roentgenographic or postmortem observation—was available in only 165 of the 318 cases. Of the 34 per cent without cardiac enlargement, 40 per cent died; of the 66 per cent with cardiomegaly, 71 per cent died.

Mild, moderate, and severe degrees of pain were associated with mortality rates of 21 per cent, 35 per cent and 40 per cent, respectively. No statistically significant relationship could be established between mortality and the location, radiation, duration or number of episodes of pain. Ten per cent of the patients in the series did not complain of pain; 73 per cent of that group died. Several of these patients, however, were in deep shock, stuporous or under the influence of narcotics, hence unable to report pain. If these were excluded and only conscious patients who denied pain on direct questioning were considered, the number of so-called "silent infarcts" would have been smaller and the mortality rate undoubtedly less.

TABLE 2.—*Circumstances Immediately Preceding Infarction—Relation to Mortality*

	Number of Cases	Incidence (Per Cent)	Mortality (Per Cent)
Hemorrhage	1	0.5	100
Postoperative state	11	6	73
Rest	105	55	42
Exertion	42	22	38
Meal	31	16	32
Emotion	2	1	0

TABLE 4.—*Mortality with Regard to Site of Infarction*

	Number of Cases	Incidence (Per Cent)	Mortality (Per Cent)
Anterior	85	27	34
Anteroseptal	36	11	81
Anterolateral	45	14	51
TOTAL ANTERIOR	166	52	49*
Posterior	101	32	21
Posteroseptal	10	3	70
Posterolateral	16	5	25
TOTAL POSTERIOR	127	40	24*
COMBINED ANTERIOR AND POSTERIOR	20	6	70

*Significant at 0.1 per cent level.

Site of Infarction

Information as to the site of infarction, based on electrocardiographic and necropsy findings, was available in 313 cases (Table 4). Anterior infarction, particularly at the septum, had the poorer prognosis, and the mortality was likewise high for those patients with combined anterior and posterior infarctions.

Disorders of Rhythm and Conduction

Table 5 seems to indicate that auricular arrhythmias are actually associated with a lower than average mortality in myocardial infarction, while ventricular arrhythmias apparently worsen the prognosis, as do left auriculoventricular block and atypical bundle branch block.

Thromboembolic Complications

Consistent with the thromboembolic nature of myocardial infarction is the high mortality, shown in Table 6, among patients with other evidence of a thrombotic tendency, particularly those with visceral and multiple emboli, all of whom died.

TABLE 3.—*Incidence of Certain Signs in Infarction—Relation to Mortality*

	Number of Cases	None		Mild		Moderate		Severe	
		Incidence (Per Cent)	Mortality (Per Cent)	Incidence (Per Cent)	Mortality (Per Cent)	Incidence (Per Cent)	Mortality (Per Cent)	Incidence (Per Cent)	Mortality (Per Cent)
Shock	311	52	23	15	32	18	61	15	84*
Congestive failure	311	54	21	11	23	20	70	15	83*
Cyanosis	300	61	25	12	46	18	60	9	82*
Dyspnea	305	40	16	14	31	25	54	22	76*
Cardiomegaly	165	34	40			61	71*		
Severity of pain	290	10	73	5	21	18	35	67	40

*Significant at 0.1 per cent level.

DISCUSSION

Mortality rates in several series are illustrated in Table 7. As can be readily seen, they vary widely—from 3 per cent to 78 per cent. Such studies are not actually comparable for several reasons. In some series, patients dying within the first 24 hours after admission and patients who had had a previous attack were excluded. Some studies deal only with patients treated in private practice, others only with indigent patients, and still others a combination of the two. A perusal of these studies, as well as others, has suggested to us that investigators of survival in acute infarction can readily be classified as either "splitters" or "lumpers." The "splitters" have assembled a highly selective group of cases and presented attractively low mortality rates. The "lumpers" on the other hand have collected an assorted group of cases and have obtained an average mortality figure. Since it was apparent from early studies in prognosis that little could be learned from this method, many investigators came to divide their material into groups based on degree of severity as judged by clinical appearance, and then computed mortality rates for each group. The problem to date is that seldom have two investigators used the same criteria for grouping cases.

One method used to grade cases of acute myocardial infarction for prognostic purposes is the "good risk-bad risk" method of Russek and Zohman.[11] Applying their criteria to the data here presented, the authors found a 50 per cent mortality among the "poor risk" cases and a 10 per cent mortality among the "good risk" cases. However, among the "good risk" patients who died, there were four who, although they fulfilled the Russek-Zohman criteria, certainly could not be called bona fide "good risks": two were comatose and two had advanced carcinomatosis. Without these, the number of "good risk" cases was 72 and there were three deaths, or a mortality rate of 4 per cent. This compares favorably with Russek and Zohman's[11] report of a 3 per cent mortality in their "good risk" series. It may be concluded that if a patient is "good risk" at the time of admission to the hospital, survival from an acute attack can be predicted with a high degree of probability. This is in substantial agreement with the findings of the Committee on Anticoagulants[15] which concluded that the physician's appraisal of severity of a myocardial infarction at onset has high predictive value.

Schnurr[12] devised a semiquantitative method for grading the severity of acute myocardial infarction in which numerical values are assigned to clinical findings at the time of hospital admittance. The total number of points allotted to each case is its pathologic index reading (PIR). The authors have ap-

TABLE 5.—*Mortality with Regard to Disorders of Rhythm and Conduction in Infarction*

	Number of Cases	Incidence (Per Cent)	Mortality (Per Cent)
AURICULAR ARRHYTHMIAS			
Auricular tachycardia	6	2	33
Auricular fibrillation	20	7	30
VENTRICULAR ARRHYTHMIAS			
Ventricular tachycardia	6	2	67
Frequent ventricular premature contractions	22	6	55
AURICULOVENTRICULAR BLOCK			
1st degree	14	4	50
2nd degree	4	1	50
3rd degree	2	0.6	50
BUNDLE BRANCH BLOCK			
Right	11	3	27
Left	10	3	70
Atypical	7	2	86

TABLE 6.—*Mortality with Regard to Thromboembolic Phenomena in Infarction*

	Number of Cases	Incidence (Per Cent)	Mortality (Per Cent)
Phlembothrombosis	20	6	55
Embolism, cerebral	8	2	50
Embolism, peripheral	1	0.3	100
Embolism, pulmonary	16	5	87
Embolism, visceral	8	2	100
Embolism, multiple	6	2	100

TABLE 7.—*Mortality Rates for Acute Myocardial Infarction in Published Series*

Investigators	Year	No. of Cases	Type Service	No. of Attacks	Mortality (Per Cent)
Parkinson & Bedford[9]	1928	100	H, W, P	A	23
Levine & Brown[4]	1929	143	W, P	A	53
Conners & Holt[3]	1930	287	H, W, P	A	16.1
Master, et al.[6]	1936	267	H, W	1	16.5
Rosenbaum & Levine[10]	1941	208	W, P	1	33
Woods & Barnes[14]	1942	128	P	A	47
Newman[8]	1946	50	M	A	78
Mintz & Katz[7]	1947	572	H, W, P	1, 2	21.8
Smith, Keyes & Dunham[13]	1947	920	P	A	23.3
Billings, et al.[2]	1949	240	W	A	40.4
Baer, et al.[1]	1951	182	H	A	8.5
Russek & Zohman[11]	1951	1047		A	33.4
Russek & Zohman[11]	1951	489		1	3.1
Present series	1956	318	P	A	41.0

H—Home Patients W—Ward Patients P—Private Patients M—Military Personnel

TABLE 8.—*Distribution of Cases and Mortaiity Rates According to Pathoiogic Index Rating* in Three Series*

Pathologic Index Reading	Series					
	SCHNURR		PRESENT SERIES		LINKO	
	Cases	Mortality (Per Cent)	Cases	Mortality (Per Cent)	Cases	Mortality (Per Cent)
0 to 19	32	8	24	11	38	5
20 to 39	28	26	15	13		
40 to 59	20	35	19	34	34	17
60 to 79	12	82	18	63		
80 plus	8	95	24	77	38	55

*Pathologic index rating (by the method of Schnurr) is arrived at by assigning numerical values to various clinical findings at the time of admittance to hospital.

plied this method to the data herein presented and have compared it with a series of Schnurr[12] and also with a series of Linko,[5] a Finnish investigator. The distribution of PIR classifications in the three studies is shown in Table 8, and seems to demonstrate clearly the fallacy of comparing average mortality figures of different series because of the considerable inequality of severely ill patients in each group. For instance, in the series here reported there are three times as many critically ill patients as in Schnurr's group, and in Linko's series there are nearly five times as many. Table 8 also shows mortality rates in the different PIR groups in the three series. In all three there is a progressive rise in mortality rates associated with a rise in the PIR. This suggests that a semiquantitative rating system may be feasible.

Review of the literature brings out impressively the need for some standard method of grading acute myocardial infarction—a method which would be used by most investigators. Tumors, hypertension and rheumatoid arthritis have been classified for prognostic purposes with fair success; why not heart attacks? If some method of classification were generally accepted, it would not only augment knowledge of the natural history of the disease but would supply valuable control data for future investigations of therapeutic agents.

511 South Bonnie Brae Street, Los Angeles 57 (Harnagel).

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A Simple Suction Adjunct for Endoscopic Fulguration

BRUCE L. ODOU, *M.D.*, and EUGENE R. ODOU, *M.D.*, Montebello

Good sigmoidoscopic surgical operation is dependent primarily upon good visualization. Smoke and blood often obstruct the view of the operative field during procedures in which desiccating current is used. For most surgeons the expensive combination electrode-suction appliances are not readily available. An ideal suction mechanism can be made by using discarded intravenous tubing from a standard intravenous drip set. The plastic tubing is taped to the desiccating electrode with one end near the cauterizing tip. A small hole is then cut in the side of the tubing near the place the surgeon puts his hand when using the instrument. When the other end of the tubing is attached to a source of suction, blocking the hole with the thumb induces suction at the site of operation. This is much like the Gorsch electrocoagulation and suction handle device but is far cheaper; and if it becomes plugged with clots or other firm matter, it is far easier to clean. If need be, the tube can be replaced quite easily.

Although the improvised device is bulkier than the Gorsch instrument, it is not at all cumbersome. It has been used extensively in cervical conization and cauterization and in removal of polyps of the colon or villous papillomae. Recently it has been used to help relieve obstipation due to inoperable rectal carcinoma.

Submitted August 22, 1958.

401 West Beverly Boulevard, Montebello (Bruce Odou).

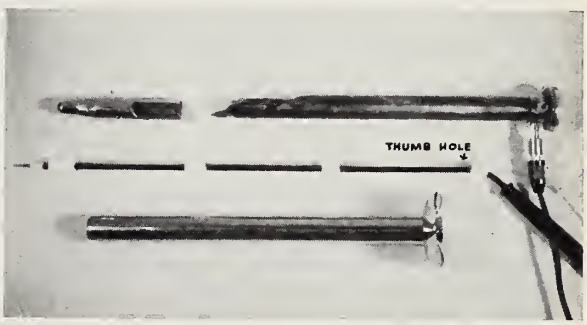
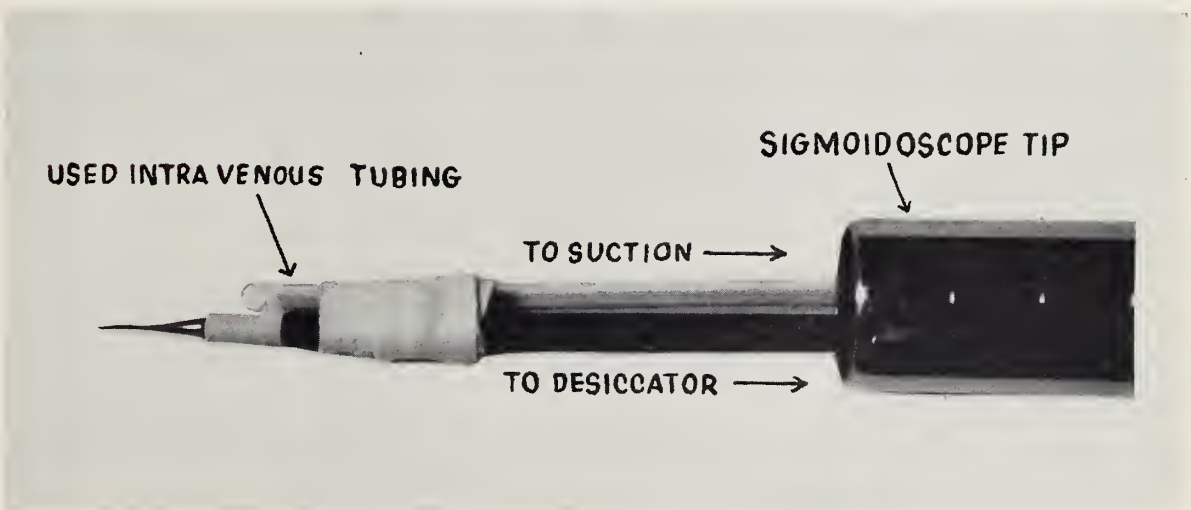


Figure 1.—*Picture at right* shows desiccating tip with plastic tube taped to it. The site of the hole in the side of the tubing for purpose of applying or interrupting suction is within reach of the surgeon's thumb. The sigmoidoscope is pictured to show relative size of the device. *Below* is a view of the tip of the device, shown extending from the end of the sigmoidoscope.



Cerebral Vascular Occlusion

Angiographic Diagnosis

STANLEY B. REICH, *M.D.*, JOSEPH LEVITIN, *M.D.*, and LELAND R. FELTON, *M.D.*, San Francisco

• **Cerebral arterial occlusion is a fairly frequent condition. We have diagnosed nine cases by cerebroangiography in the past two years, and there are many patients not given this special examination.**

Precise diagnosis has become more important as advances in therapy make prognosis more hopeful. The symptoms are various according to the location and degree of occlusion and the amount of collateral circulation.

Angiographic diagnosis is not difficult, but repeated demonstration of the block should be insisted on. This is best done with multiple exposures after a single injection of contrast medium. We use 7 cc. of 50 per cent Hypaque® and one exposure per second through the arterial, capillary and venous phases. The films should cover the entire head and neck lest an occlusion in the common carotid be overlooked. We have found the Schonander biplane apparatus very satisfactory, using films 14 inches square and exposing them in anteroposterior and lateral projections simultaneously.

WITH THE INTRODUCTION of cerebral angiography by Egaz Moniz the vessels of the brain were shown *in vivo* for the first time.[2] The many syndromes associated with vascular occlusion are now being delineated.[1,4]

Many studies have been done using single radiographic exposures after the injection of contrast media into the carotid or vertebral arteries.[3] This procedure will often demonstrate occlusions but occasionally is inconclusive because of the difficulty in timing the exposure. Also, contrast media do not mix intimately with the blood but tend to layer, giving a false impression of narrowing.

We have been struck by the number of false impressions obtained if only one of a series of films is examined. We believe that films should be taken at least one a second in each plane during the entire arterial, capillary and venous phases. It is preferable to take them biplane with simultaneous exposures. The films should be large enough to include the areas of possible stenosis from the common carotid artery to the terminal cerebral arteries.

From the Department of Radiology, Mount Zion Hospital, San Francisco 15.

Submitted November 13, 1958.

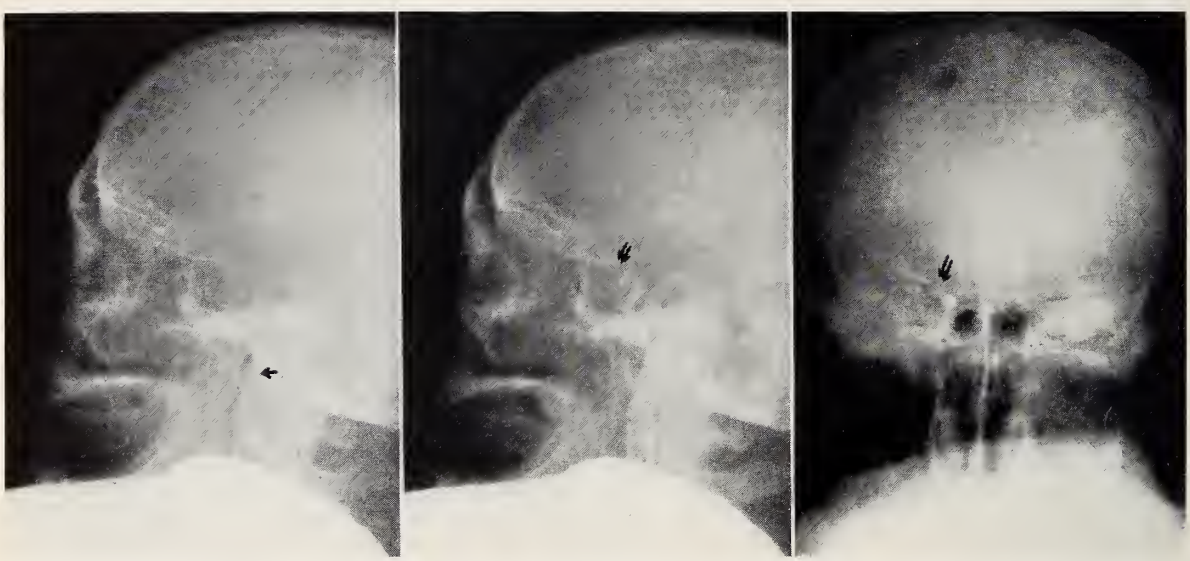


Figure 1 (Case 1).—*Left:* Lateral projection two seconds after start of injection, giving false impression of narrowing of internal carotid artery (arrow). *Center and right:* Lateral and anteroposterior projections, four seconds after start of injection, demonstrating narrowing of carotid where it leaves the foramen (double arrows). This was confirmed on several films.



Figure 2 (Case 2).—*Left:* Lateral projection three seconds after the start of injection. *Center and right:* Lateral and anteroposterior projections six seconds after the start of injection. Note the consistent block of the left internal carotid artery at the siphon (double arrows). The ophthalmic artery is slightly dilated as a result of collateral circulation through it (single arrow).

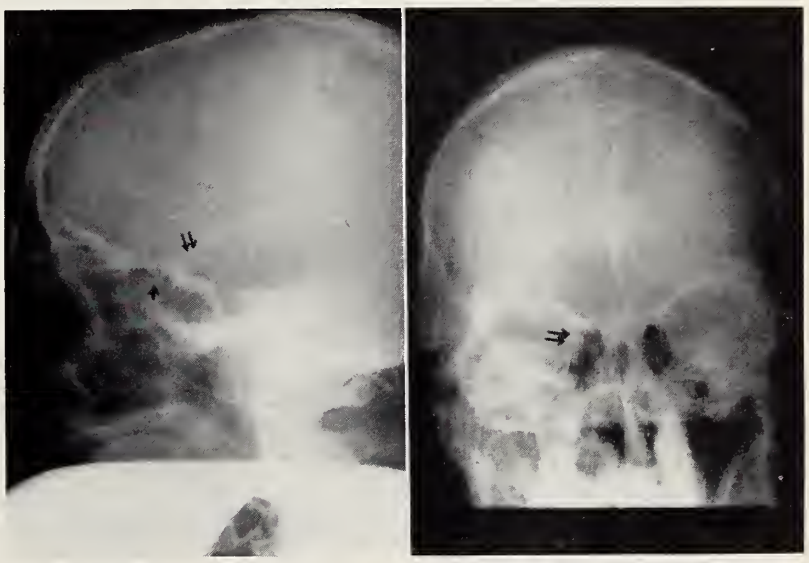


Figure 3 (Case 3).—Lateral and anteroposterior projections four seconds after the start of injection. A block of the right internal carotid artery in the siphon is shown (double arrows). This was confirmed on multiple films. The ophthalmic artery is demonstrated (single arrow).

The diagnosis of vascular occlusion or narrowing must hinge upon the repeated demonstration of lack of filling of the branch vessels. The following cases illustrate the use of the serial biplane exposures suggested above.

Case 1. A 45-year-old white man had noticed muscular weakness starting about a year previously in the left biceps and spreading gradually to the forearm and hand. All neurological signs were on the left: facial weakness, weak upper arm (upper motor neurone) and weak dorsiflexion of the foot, together with diminished sensation in the hand (judged to be cortical) and general hyperthesia and hypalgesia on that side.

Cerebral angiography (Figure 1) showed in the first film a narrowing in the carotid artery which later filled out. In the second film a block in the right carotid siphon was seen. If only the first film had been taken this block would have been missed and diagnosis based on the first false impression.

Case 2. The patient was a 58-year-old white man who was admitted to hospital because of papilledema of two weeks' duration. Five years previously he had had a cerebrovascular accident with right hemiparesis but had completely recovered. In the previous three months he had had sensory changes of the right side of the body, and a right homonymous field defect developed. He had trouble finding cer-

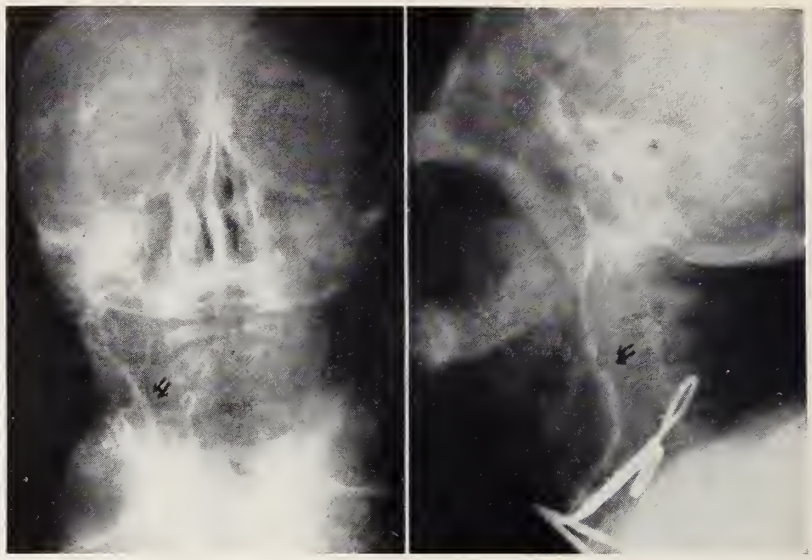


Figure 4 (Case 4).—Anteroposterior and lateral projections two seconds after the start of injection. There is a complete occlusion of the internal carotid artery just beyond the branching of the common carotid (double arrows).

tain words and had severe frontal headaches. The papilledema was demonstrated during examination.

Sensation was diminished to touch and pinprick over the whole right half of the body. There was slight right facial weakness and difficulty in convergence. Decided aphasia, motor and sensory, for both writing and speech was noted. The blood pressure was within normal limits. An electroencephalogram showed focal disturbance in the left temporoparieto-occipital region.

Cerebral angiography (Figure 2) demonstrated a consistent block of the left carotid siphon. Some collateral circulation was demonstrated through the ophthalmic artery.

CASE 3. A 78-year-old white man had been mentally confused for a month, with loss of memory and impairment of sight and hearing. He complained of increasing weakness of the left arm and leg. Upon examination, left hemiparesis, including facial weakness, was noted. The deafness was conductive, old. An encephalogram showed depressed function over the right cerebrum.

Cerebral angiography (Figure 3) showed a block of the right common carotid artery in the siphon. The ophthalmic artery was demonstrated.

CASE 4. The patient was a 70-year-old white man who suddenly became comatose and disoriented. Upon physical examination, left hemiparesis was noted.

Cerebral angiography (Figure 4) demonstrated occlusion of the right internal carotid artery just beyond the bifurcation of the common carotid artery. Endarterectomy was done, with moderate improvement.

Mount Zion Hospital, 1600 Divisadero Street, San Francisco 15 (Reich).

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Medical Aspects of Commercial Jet Air Travel

M. FREDERICK LEEDS, M.D., San Francisco

• Jet aircraft will further enhance the medically safe and comfortable transportation of persons with disease. Experience in military medicine, substantiated by civilian commercial air travel experience, has already proved that transportation of sick or disabled persons in propeller-driven planes is essentially benign.

Certain restrictions are necessary regarding carriage of sick passengers on commercial aircraft whether jet-propelled or of propeller type. These restrictions are primarily related to the comfort of fellow passengers and to the nonmedical environment of commercial airliners rather than to any risk of air travel *per se*.

In the period 1947 through 1955 deaths of passengers while in flight on American scheduled airlines ranged from seven a year to twenty.[4] Of 41,623,000 passengers carried in 1955, only 18 died in flight. The United States Air Force has now successfully evacuated over 2,000,000 patients by air. These data emphasize the medical safety of air travel.

Further documentation is derived from a study[1] of the effects of air travel in 1,777 flights of patients with cardiac and pulmonary disorders carried by the Military Air Transport Service in 1949. Only nonpressurized aircraft were used, and the flights were at altitudes of up to 10,000 feet. There were 464 flights of patients with cardiac disease. In this group only four, an incidence of less than one per cent, had an aggravation of symptoms while in flight. In 568 flights of patients with pulmonary disorders, other than tuberculosis, 2.4 per cent had mild symptoms related to their disorder. In 745 flights of patients having pulmonary tuberculosis and complications of that disease, 2.7 per cent had mild or moderate symptoms relating to their disorder. There were no deaths in the entire series, and all flights were completed successfully.

If an ill or injured passenger can be transported at all, he can be transported long distances more expeditiously, more efficiently and with a greater degree of safety and comfort by air than by any other means. This is a conclusion arrived at from experience with conventional propeller-type aircraft. Use of jet aircraft, which will reduce flight time by approximately 50 per cent and provide a smoother, less noisy, vibration-free environment in the aircraft cabin, will further enhance the safe transportation of patients with greater comfort and less fatigue. The current American-built jet transports fly above turbulent weather at altitudes of 30,000 to 40,000 feet and have a cruising speed of approximately 600 miles an hour. At cruising altitude the pressurization system maintains the cabin pressure at the equivalent of an altitude of 6,700 feet, which is less than the pressure maintained at maximum cruising altitude by some of the more advanced propeller-driven aircraft. In an emergency situation the jet cabin pressure can be brought down to the sea level pressure by a descent of the aircraft to 22,500 feet.

Submitted December 16, 1958.

Dr. Leeds is Medical Director, Pacific-Alaska Division, Pan American World Airways System.

The one potential medical problem pertaining to passengers which is inherent in jet air transportation is a possible loss of pressurization while at cruising altitude. The partial pressure of oxygen at altitudes of 30,000 to 40,000 feet is not sufficient to maintain consciousness or life for more than a very short time. Great emphasis, therefore, has been placed on design features and testing of the new jet aircraft to prevent pressurization loss in flight. The more important design features in this regard are as follows:

1. The thickness and strength of the aircraft skin and structural members will withstand a much greater pressure differential than the differential of 8.6 pounds per square inch that is the standard requirement.

2. The fuselage is designed to resist tearing and to stop rips so that should openings in the fuselage occur they will not enlarge beyond an area of a few square inches and pressurization loss would be very slow.

3. The windows are small to minimize effects in case one breaks; and the possibility of leaks through a break is slight, for there are three panes of glass in each window, and either of the two outer panes alone can withstand the pressure differential.

4. The doors and hatches are sealed by pressure from within the fuselage, thus forming a plug from within outward.

5. There are three turbocompressors, each on a different engine, to supply pressure to the cabin. Any of them alone can do the job. If the mechanism for automatic cabin pressure control fails, the system can be controlled manually.

It is believed by aeronautical engineering author-

ities that the design characteristics of the jet make failure of pressurization as remote as wing failure. Even so, there are two other features for the protection of passengers against loss of pressure. One is the aircraft's ability to descend to 10,000 feet from 40,000 feet in two to three minutes, the passengers having a sensation like that of swift descent in an elevator. The descent can be begun instantly, for warning signals in the cockpit immediately alert the crew to any loss of pressure in the cabin. The second feature is oxygen masks that automatically pop out from an overhead compartment and dangle in front of each passenger's face if the cabin pressure reaches the equivalent of 12,000 feet. The masks supply a continuous flow of oxygen. Passengers always are instructed in use of the equipment before the aircraft reaches cruising altitude. Sudden anoxia could of course cause serious complications in certain persons, but the risk in this regard is probably much less than the varied risks involved in other types of transportation. The possibility of aeroembolism occurring with loss of pressurization is very slight. for passengers would be exposed to decreased atmospheric pressure for a very short time.

OTHER MEDICAL CONSIDERATIONS

As was noted previously, air travel *per se*, and particularly jet air travel, does not present a hazard to patients who are transportable. However, owing to a lack of medical facilities and trained medical personnel aboard commercial aircraft and in consideration of the comfort of fellow passengers, certain restrictions[2] are necessary:

1. A patient whose illness is objectionable to other passengers because of appearance or odor should not be permitted to travel on commercial aircraft.

2. Patients with contagious diseases should not be carried for obvious reasons.

3. A patient who, because of his illness, cannot take care of his needs should not be carried unless, by previous arrangements, a suitable medical attendant travels with him. Cabin attendants are usually too busy with routine duties to provide anything but simple emergency first aid care to an individual passenger.

4. Patients whose behavior might be upsetting or hazardous to fellow passengers should not be carried. This applies primarily to patients with severe emotional disturbances.

5. Patients with illness of a type or severity to present a serious hazard in a mild respiratory stress situation when expert medical care is not immediately available should not fly on commercial aircraft.

6. Illnesses associated with trapped gasses in body cavities, such as pneumothorax, should not fly because of gas expansion at altitude.

Problem cases should be evaluated for flight by the private physician on an individual basis. As an example, since there are no adequate facilities to perform a delivery in the air, a woman beyond the eighth month of pregnancy should not fly. Air travel is not injurious to an expectant mother or the unborn child, but a delivery in anything but medical environment can cause unneccessary problems.

Other specific examples[3,4] of medical contraindication to flight on commercial airliners are: Advanced cardiac decompensation, cyanosis, vital capacity of 50 per cent of normal or less, severe anemia (hemoglobin content less than 8.5 gm. per 100 cc.), status asthmaticus, mandibular fixation by wiring unless of the "rip cord" type to permit opening of the mouth in event of airsickness and vomiting, poorly controlled epilepsy, and myocardial infarction within six weeks of onset. Infants less than 14 days old should not be taken aloft because of instability of the respiratory mechanisms.

Airline medical directors are available for consultation, with the personal physician, on cases presenting special or difficult problems in relation to air travel.

350 Post Street, San Francisco 2.

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Oxanamide

Adjunctive Use of a New Tranquilizer in Gynecology

ROBERT B. WOODHULL, M.D., San Jose

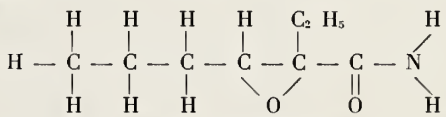
• Oxanamide (Quiactin®) was administered to 45 patients with a wide variety of gynecologic ailments associated with nervous or emotional tension. The most common conditions with which anxiety was associated in this series were premenstrual tension and the menopause. Thirty-seven of the patients were benefited. Four of the 45 patients had mild side effects.

THE PHARMACOLOGIC FEATURES of oxanamide (Quiactin®) were first described in 1949.[8] The compound was originally compared with pentobarbital, because in experimental animals large doses induced sleep. In rabbits the minimal hypnotic dose intravenously is approximately seven times that of pentobarbital, but the lethal dose is approximately eleven times that of pentobarbital. It was concluded that oxanamide in large doses functions as a barbiturate, except that it has a lower milligram potency and a wider margin of safety.

More recently[6] it has been found that oxanamide is an internuncial neuron blocking agent. Like the prototype of this classification of drugs, mephenesin, it attenuates polysynaptic reflex arcs (flexor and linguo-mandibular reflexes) and has no effect on monosynaptic reflexes (patellar). It is effective when given by mouth and the duration of action is longer than that of mephenesin. In appropriate doses, oxanamide causes pronounced relaxation of skeletal muscle in cats, rats, and mice. During this effect, cats remain alert and responsive to external stimuli and are content and relaxed even when held in awkward positions. Higher doses cause further relaxation of skeletal muscles and loss of locomotor function, particularly in mice and rats. It is only at these doses that conditioned avoidance responses are impaired in rats. Oxanamide has no effect on respiration except at toxic doses; and there is no evidence of effects directly on skeletal muscle, neuromuscular junction or peripheral nerves.

In mice, oxanamide protects against the convulsant and lethal effects of pentamethylenetetrazol and maximal electroshock-induced seizure, and, to a lesser extent, against the lethal effects of strychnine. The depressant effect of large doses of oxanamide can be antagonized by pentamethylenetetrazol. Oxanamide has no effect on the autonomic nervous system or on the cardiovascular system. It has no antihistaminic or antimuscarinic activity and no effect on smooth muscle of the gastrointestinal tract.

Even though oxanamide is an internuncial neuron blocking agent, it is different chemically from mephenesin and meprobamate. The structural formula is:



The clinical use of oxanamide was not described until early in 1957 when Feuss and Gragg[3] reported their experience with the use of the compound in chronic psychotic patients in a state hospital. The drug was first given to 13 "chronically irritated" patients during a 30-day test period. All these patients were employed in the hospital laundry and were receiving electroshock therapy for symptomatic control. Six of the 13 patients were improved so much that ground privileges were granted for the first time, and the amount of electroconvulsive therapy required was strikingly reduced. This preliminary study was followed by a twelve-month study in which 60 chronically psychotic female patients were treated with oxanamide in dosage of 0.8 gm. to 4.8 gm. daily. At the end of the 12-month period, four of the 60 patients were sufficiently improved to be discharged from the hospital; and fourteen others did so well that temporary visits home were permitted. Drowsiness occurred as a side effect only in patients receiving large doses.

Coats and Gray[2] administered oxanamide in standard dosage of 1.6 gm. daily (one 400 mg. tablet four times daily) to 30 chronically psychotic patients who had been resistant to previous drug therapy. Improvement in behavior, therefore, came as something of a surprise. Because of the improved behavior, treatment was continued for periods of six to eighteen months; and ultimately 10 of the 30 patients were paroled from the state hospital. No

Submitted October 3, 1958.

withdrawal symptoms, excessive drowsiness or other side effects resulted from administration of oxanamide. The number of patients in the series studied by Coats and Gray now has been increased to 410 and the period of treatment to 39 months.[1] All the patients, 390 adults and 20 children, received a standard dose of one tablet four times daily. The tranquilizing effect of oxanamide was apparent in approximately 75 per cent of this group of mentally-ill patients with chronic disorders of many years' duration. Among the children, convulsive disorders appeared to respond more favorably than behavior disorders.

The first use of oxanamide in patients not confined to an institution for the treatment of mental illness was reported[7] by an industrial psychiatrist who administered the drug to a series of 40 factory employees. It was given to these subjects in daily dosage of two to four tablets (800 to 1600 mg.) for the control of increased psychomotor activity, agitation, restlessness and tension headache. The tranquilizing effect of oxanamide was comparable with or perhaps slightly superior to that of meprobamate. Oxanamide, however, was preferred because it had no tendency to produce drowsiness. The workers were able to stay on the job, exercising their usual degree of manual dexterity and speed.

The first use of oxanamide in the office practice of internal medicine was reported by Hock.[5] He treated primarily patients with functional bowel distress, and he used oxanamide in dosage of 400 mg. three to four times daily concurrently with antispasmodic agents. In 202 cases, the drug was administered concurrently with Bentyl® (dicyclomine hydrochloride). The symptomatic response was superior to that observed previously with simple antispasmodic therapy or the concurrent administration of Bentyl with phenobarbital.

Early in 1958, Feuss and Ivanov[4] reported the satisfactory use of oxanamide in an outpatient clinic associated with a state hospital for mental illness. In this report special attention was directed to the freedom from symptoms described by patients as "dopiness, tiredness, loginess or sleepiness," which represented a substantial advantage of oxanamide therapy.

THE PRESENT STUDY

All patients reported in this study were observed in the routine office practice of obstetrics and gynecology. The author does not feel in any way qualified to render intensive psychotherapy and none was attempted except for the usual explanation of why oxanamide was being administered and what might be expected from its use. The patients were specifically instructed that hypnotic or sedative effects were not to be desired; and in several instances when these effects were noted following the usual dosage of three tablets daily (total 1,200 mg. oxanamide), the patients were instructed to reduce the dosage or to take the drug only at bedtime.

Patients with severe agitation, chronic alcoholism and pronounced depression are rarely seen in the author's practice; and since no attempt was made to treat patients obviously needing intensive psychiatric and rehabilitation therapy, none was included in this series.

The tranquilizing effect of oxanamide was frequently noticeable within two or three days, and improvement in nervous and emotional symptoms was soon evident. Great improvement in mood and in ability to concentrate and complete their usual daily chores was noted by many patients within a few days. Since the action of oxanamide is primarily subcortical, this tranquilizing effect is obtained without dulling of the sensory stimuli. Frequent expressions from the patient attesting the beneficial effects of oxanamide were that they "were more aware of their surroundings," "had more interest in life" and "were better equipped to face conditions of stress."

The relaxing effect and subsequent relief of tensions were most readily apparent in patients suffering from premenstrual tension. In these cases, the drug was usually started from two to six days before the expected date of the menses or when the symptoms of bloating, tension and headaches appeared.

Oxanamide was found to have a most useful therapeutic effect without interfering with the patient's normal daily activity. Daily observations or changes in dosage were not necessary.

In treatment of menopausal patients, a combination of oxanamide and a fat-soluble, slowly released estrogen proved ideal for relief of the agitation and emotional tension as well as of the vasomotor complaints. The menopause occurs at a time in the life of the average woman when her children are grown and have achieved a maximum state of independence of parental guidance and her husband is at the peak of his career and has diluted home interests in favor of those concerned with his business. She finds herself no longer the pivot about which her family has previously functioned. These factors, quite naturally, may lead her to a feeling of insecurity which is enhanced by her interpretation of the menopause as a difficult period which marks the end of her youthful productivity.

Coupled with these subtle but obvious changes in her environment, further stress occurs with the decrease in ovarian function during the menopause. She experiences the symptoms of estrogen deficiency,

such as menstrual, vasomotor and urinary disturbances, dyspareunia, mastalgia and fatiguability. Other symptoms which are caused in part by hormone imbalance and in part by her preexisting anxiety and tension are nervousness, irritability, insomnia, headaches, depressed libido and vague and indefinite muscle and joint pains.

In prescribing tranquilizing drugs one must bear in mind that in many cases the symptoms do not warrant continued use of them. In several cases in the present study the patients made personal adjustments in their emotional problems and the use of oxanamide was promptly discontinued.

The present study is a preliminary report which indicates that in the field of obstetrics and gynecology oxanamide is a potentially useful drug for the control of emotional disturbances that contribute to, or in some cases may even cause, a wide variety of illnesses. The results in 45 patients were as follows:

Condition with Which Emotional Disturbance Was Associated	Result, Number of Cases		
	Good	Fair	Poor
Premenstrual tension	7	4	5
Menopause	7	5	
Postoperative	3		
Sexual frustration and marital tension	1	1	1
Functional uterine bleeding	2		
Dysmenorrhea	1	1	
Pre- and postpartum	1		1
Insomnia	1		1
Tension		1	
Carcinoma	1		
Endometriosis	1		
Total	25	12	8

The following report of a case illustrates the kind of patient who is an excellent candidate for oxanamide therapy and the kind of response to be expected from the drug:

A woman 32 years of age was first examined in the office in September, 1956. She complained of easy fatiguability, loss of weight, poor appetite, nervousness, occipital headaches and urinary frequency. She had had four pregnancies—one miscarriage and three normal children. Surgical history included mastoidectomy at the age of four, tonsillectomy in childhood and removal of a cyst on the ovary and an appendectomy in 1947. Menses had been increasingly irregular during the previous three or four months.

Upon physical examination the patient was observed to be thin, tense and nervous. The blood pressure was 132/86 mm. of mercury. No abnormality was noted in the heart and lungs. The breasts were atrophic. Upon pelvic examination a small cystocele was noted. The right ovary was slightly enlarged and tender.

A high caloric diet supplemented with iron and calcium capsules was prescribed, and the patient was advised to stop smoking. She was instructed to drink cream with each meal and to eat more regularly.

Subsequent interviews brought to light a deep-seated marital problem and difficulty in sexual adjustment. The patient admitted that she was dissatisfied with her husband sexually and had turned to a paramour. Both the patient and her husband were referred to a psychiatrist for consultation, and he diagnosed psychophysiologic genitourinary reaction and premature ejaculation in the husband. Both patient and husband were given oxanamide in dosage of one tablet (400 mg.) three times daily. In later interviews the patient expressed remorse at her previous actions and seemed to be generally more calm and adjusted. Her anxiety and nervousness had subsided. The dosage of oxanamide was increased to four tablets (1.600 mg.) daily, and both the patient and her husband later made a successful adjustment.

DISCUSSION

In this group of 45 patients treated with oxanamide, side effects were relatively uncommon. One patient complained of nausea, one of vertigo, and two of drowsiness. In all cases the reactions were mild, and the causative relationship of oxanamide to the side effects is debatable.

No evidence of toxicity, jaundice or abnormalities of the blood could be associated with oxanamide. Habituation was not a problem.

The dosage of the drug varied with the degree of emotional upset. The usual dose was one tablet (400 mg.) four times daily, but some patients needed as many as eight tablets (3,200 mg.) daily while for others two tablets a day (800 mg.) was adequate. When insomnia was associated with the tension and anxiety, increased dosage at nighttime was highly beneficial.

2015 Clarmar Way, San Jose 28.

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CLINICO-PATHOLOGICAL CONFERENCE

RICHARD S. COSBY, *M.D.*
Pasadena, *Clinical Discussant*

BENJAMIN E. KONWALER, *M.D.*
Long Beach, *Pathologist*

A 31-YEAR-OLD Caucasian male was admitted to hospital on November 24, 1950, because of scantiness of urine and swelling of the face, body and legs for one week. Previously, a physician had told him his kidneys were bad and had given him a "water shot" which caused good diuresis. However, edema had returned, and on the day before admission a pruritic rash had developed on the patient's head. There was no history of infection or other significant feature.

On admission, the patient was obese, with pronounced swelling of the face and puffiness of the eyes. The blood pressure was 134/84 mm. of mercury, the temperature 100.8°F., pulse rate 96. Basal rales were heard over both lungs, with decrease in breath sounds and dullness on percussion. The heart sounds were faint and no murmurs were audible; the second pulmonic was greater than the second aortic sound. A rash of small papules was present over the scalp and the lower parts of the legs. Venous pressure was 260 mm., circulation time 21 seconds.

Leukocytes numbered 7,000 to 11,900 per cu. mm. with a normal differential; and erythrocytes, 5.4 to 5.86 million per cu. mm.; hemoglobin was estimated at 16 to 17.3 gm. per 100 cc. The sedimentation rate was 1 mm. in 1 hour. The urine contained at the most 1 plus albumin, few leukocytes; the pH was 5 to 6. The serum albumin was 3.4 gm., the globulin 1.5 gm., and the urea nitrogen 11 mg. per 100 cc. Carbon dioxide was estimated at 33.9 mEq. per liter, calcium at 5 mEq., chlorides at 98 mEq., and total base at 150 mEq. Urea clearance was 74 per cent of normal. Electrocardiographic findings were compatible with right ventricular hypertrophy. Roentgen studies of the chest showed cardiac enlargement compatible with mitral valve disease due to rheumatic fever or Lutembacher's complex. On fluoroscopy, all chambers appeared enlarged.

The patient was kept at bed rest, was given diuretics and was restricted to a low-salt diet. The edema was almost completely relieved, and the patient was discharged January 8, 1951, without the cause of heart disease being determined.

SECOND ADMISSION

He was next admitted June 13, 1953, because of persistent edema, abdominal swelling and shortness of breath. He was cyanotic but not in acute distress. Blood pressure and pulse were normal. Rales were heard in the lung bases. The heart findings were the same as on the previous hospitalization. Ascites was pronounced and the liver was palpated 3 fingerbreadths below the costal margin. There was 3-plus edema from the knees down.

Hemoglobin then was 20.4 gm. per 100 cc., the hematocrit determination 75 and erythrocytes numbered 6.46 million per cu. mm. Roentgen films again showed cardiac enlargement consistent with mitral valvular disease, and pulmonary vascular markings were prominent. Pulmonary vital capacity, which should have been about 4,400 cc., was 2,986 cc. Inspiratory reserve was 1,410 cc., resting tidal volume 580 cc., expiratory reserve 995 cc. The maximal breathing capacity, which should have been 143.2 liters per minute, was 98.72 liters. After moderate inspiration the patient could hold his breath for 31 seconds.

Presented at the 87th Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1958.

Arterial blood findings were compared in the basal state and after five minutes' intermittent positive pressure breathing (IPPB) with oxygen. The result:

	Basal	After Oxygen IPPB
Oxygen content (volumes per cent)	20.04	26.83
(Per cent of saturation)	73.3	98.5
Oxygen capacity (volumes per cent)	27.47	27.50

Low-salt diet, bed rest and diuretic treatment were again followed by diuresis. The patient was digitalized. At this time the possibility of Eisenmenger complex was considered. Cardiac catheterization on July 6 revealed high pressure in the right ventricle. Pressure in the pulmonary artery was 58/38 mm. of mercury; in the right ventricle, 27/7 and 56/10 mm. in the right auricle, 9 mm. The patient was discharged August 11 and digitalis therapy was continued.

THIRD ADMISSION

June 6, 1954, the patient was readmitted with the same symptoms. Polycythemia was again noted, although the leukocyte count was normal and platelets were estimated at 160,000. A loud harsh systolic murmur was heard along the left sternal border at the second and third intercostal spaces; this murmur faded as the patient improved.

On June 24 the vital capacity (estimated normal, 4,650 cc.) was 2,074. Inspiratory capacity was 1,866 cc., tidal volume 290 cc., expiratory residual capacity, 207 cc. Maximum breathing capacity was 50.5 cc. per minute although the normal was estimated at 150 cc. Residual air was 925 cc. Breath-holding time was 31 seconds.

Arterial oxygen content in the basal state was estimated at 39.8 per cent of saturation; after 1½ minutes' exercise, 61.2 per cent; after 3 minutes' oxygen inhalation, 93 per cent; and 5 minutes later, 70 per cent.

Angiocardiography on August 5 disclosed distention of the superior vena cava and enlargement of the right auricle and right ventricle. The pulmonary arteries were quite large, particularly the right. The left side was not well visualized but the left atrium seemed to be enlarged.

The possibility of amyloidosis was not supported by gingival biopsy findings on August 12. Plasma volume was estimated August 25 at 51 ml. per kilogram of body weight, blood volume at 165 ml. per kilogram.

Cardiac catheterization on September 9 indicated pressure in the pulmonary artery to be 79/49 mm. and 64/35 mm.; in the right ventricle, 41/12 mm.

The patient responded slowly but adequately to the same treatment he had received before. The final impression then was of a primary pulmonary disorder; shunts, diffusion defect, primary pulmonary hypertension and Hamman-Rich syndrome were considered. The patient was discharged October 9.

FOURTH ADMISSION

Only a few months later, on January 19, 1955, the patient was again admitted because of pronounced edema of the legs and abdomen, a 30-pound gain in weight, and exertional dyspnea. Roentgen films showed further cardiac enlargement, particularly of the right ventricle, and electrocardiograms indicated serious right ventricular hypertrophy with strain. Electroencephalograms disclosed a diffuse slow dysrhythmia that could not be attributed to hypoventilation.

Urine specific gravity was still normal, urea clearance was 88 per cent of average maximum, urea nitrogen 14 mg. per 100 cc. A phenolsulfonphthalein test resulted in 45 per cent excretion in 15 minutes.

On March 15, Dr. H. L. Motley made extensive pulmonary function studies indicating that lung volume was normal. Gross inadequacy of alveolar ventilation was evident, however, from measurements of arterial blood and of pulmonary ventilation. Voluntary deep fast breathing raised the arterial blood oxygen content to normal. This contrasted with the observation that the patient seemed never to breathe deeply; in fact, he appeared not to be breathing at all.

As on previous admissions, the same therapy produced improvement and the patient was discharged on June 3 with the diagnosis of pulmonary hypertension with cor pulmonale and hypoventilation of pulmonary alveoli of undetermined cause.

FIFTH ADMISSION

The patient did well for a year. Two months before his final admission on June 30, 1956, he noted ankle swelling and shortness of breath which did not subside on diuresis. The day before admission he had felt a squeezing pain in the chest that radiated to the neck and lasted about two minutes. The pain returned briefly, five or six hours later. On admission he was moderately cyanotic and had slow, shallow respiration. Crepitant rales were heard throughout the lungs. A grade two systolic murmur was heard at the apex, and a precordial friction rub was present. The blood pressure was 110/80, the pulse rate 96. The liver was enlarged but ascites was not present. There was 2 plus pitting edema of the lower extremities. Polycythemia was found to be present. Urine contained 1 plus albumin, the specific gravity being 1.010. The blood urea nitrogen was 32 mg. per 100 cc. A test for lupus erythematosus cells gave negative result.

Ten days after admission, the blood urea nitrogen had increased to 102 mg. per 100 cc.; the patient was hypotensive and anuric for two days. Roentgen films showed a huge heart, and fluoroscopy disclosed no pulsations. The patient did not respond to diuretics or to phlebotomy. A rocking bed, intermittent positive pressure with oxygen, and a respirator were used without relieving the respiratory difficulty. Large amounts of Levophed® were necessary to maintain the blood pressure. The patient continued to deteriorate and died on August 8.

CLINICIAN'S DISCUSSION

Dr. Richard S. Cosby: On the first admission of this patient we have little information to indicate a definite diagnosis of cardiac or pulmonary disease. It can only be speculated that the slight increase in erythrocyte count and hemoglobin and the cardiac enlargement without cardiac murmur, and the right ventricular hypertrophy and failure strongly implicate the right heart. Obviously, we are dealing with a most unusual form of heart disease—if it is heart disease—which leads to death within five years in a 31-year-old male.

On the second admission we begin to have some idea of the nature of the problem, since polycythemia is well advanced and right heart failure is more severe. Again, no heart murmurs are heard. The lung volume findings at this stage are not very revealing. The lung volume—almost 3 liters—is, according to my own calculation for a 5-foot, 3-inch male, almost 77 per cent of normal. The progressive lung volume reduction thereafter is no more than what might be due to encroachment of the enlarging heart. Any patient with an enlarged heart will have some decrease in lung volume. The arterial oxygen studies are helpful and begin to point out the nature of the defect. Arterial desaturation is pronounced, but the oxygen uptake is increased strongly by intermittent positive-pressure breathing.

The notation at this point, "IPPB with oxygen," presumably means "with 30 per cent oxygen," not 100 per cent oxygen. The test is usually given to demonstrate the increased oxygen uptake that can be produced by improving alveolar ventilation. If that is the case here, we can conclude that some factor was strongly decreasing alveolar ventilation. Since no test was made at this time with 100 per cent oxygen, we are left in the dark as to whether a small arteriovenous shunt was present. With 100 per cent oxygen, any degree of desaturation would denote such a shunt. Dr. Motley has shown that 100 per cent oxygen on exercise is the best test of tiny venoarterial shunts.

We're not informed at this time of diffusing capacity of the lungs or the problem of increased residual air; but we are sure that alveolar ventilation was diminished.

The next step was catheterization of the right heart. We might inquire what cardiac diagnosis might be considered in a patient with pronounced arterial desaturation, cardiac enlargement (mainly right ventricular), and no murmurs. Certainly many forms of congenital heart disease can be present without murmurs—tetralogy of Fallot, Eisenmenger complex, atrial septal defect, even with serious disability; but this is a rarity—quite a rarity. The Eisenmenger complex, however, has some place in the differential diagnosis;. first, because in this condition no murmurs are present, and secondly because polycythemia, dyspnea and disability come on somewhat late in life.

In all forms of congenital heart disease, cyanosis is due to a right-left shunt, and cardiac failure may accentuate it. It this case, though, the cyanosis was relieved by positive-pressure breathing; it is therefore most unlikely that the cyanosis is due to a right-left shunt, and therefore unlikely, too, that it is due to congenital heart disease. Further evidence is the relatively low right ventricular pressure, which is above normal but certainly not as high as in Eisenmenger's complex, where there usually is some degree of overriding of the aorta and the right ventricular pressure should be equal to the systemic.

The third admission disclosed, most importantly, a sudden decrease in tidal volume, a normal ratio of residual air to total capacity and serious decrease in arterial oxygen uptake. Furthermore, there was an amazing jump of 20 per cent in arterial oxygen uptake on exercise. This helps again in ruling out shunt as a cause of cyanosis and suggests a noncardiac cause—most probably impairment of alveolar ventilation, which is improved by exercise. Angiocardiography was done to rule out completely the possibility of right-left shunt, and I think at this point we can turn our thoughts from congenital heart disease.

Pulmonary pressure has now increased but certainly can't be as high as reported. There appears to be some mistake, because the blood is running uphill, from right ventricle to pulmonary artery, and this doesn't happen. It can run downhill, without the presence of pulmonic stenosis, but you can't have a higher pressure in the pulmonary artery than in the right ventricle.

Apparently positive-pressure breathing was not necessary to complete aeration of arterial blood, since voluntary deep breathing raised the uptake to normal. This finding suggests that there is alveolar hypoventilation but that it is not local and in fact may not be pulmonary at all. It is apparently general throughout the lung, and perhaps the cause resides in one of the neural mechanisms underlying respira-

tion. It is probably pertinent here that the second set of respiratory measurements showed only half the tidal volume of the first, though there was no gross figure for total alveolar ventilation.

Next we find the striking observation that the patient did not appear to be breathing. It's very easy to be mistaken about this. The rate of respiration is easily mistaken unless you count it, and the depth of ventilation, too, can be misjudged, especially in an obese person like this patient. Nevertheless, the unusual observation is made that practically no evidence of breathing was noted.

To summarize the pulmonary findings, then, the arterial oxygen content was low while lung volume was perfectly normal. Neither venoarterial shunt nor diffusion defect has been shown to be present. The outstanding observation is that some factor is diminishing total ventilation. The possibility that inadequate ventilation may be the underlying defect might have been suspected at the first admission, when the plasma bicarbonate was first noted to be high.

Three causes of inadequate total ventilation come to mind: The first is structural and related to the mechanics of ventilation. Spinal cord lesions, myasthenia gravis, thoracic deformity or scleroderma may so limit the thoracic cage that respiratory failure may ensue from decrease in ventilation. We have no evidence of any of these conditions here. The second possibility is obesity. Hackney and others have shown the importance of obesity in diminished ventilation, polycythemia, respiratory acidosis and heart failure. But this patient is only moderately obese; most of Hackney's patients weighed more than 250 pounds. Furthermore, the patient does not appear to be breathing. While an obese patient may not seem to breathe if one watches only the chest cage, certainly breathing can be noted by watching the abdomen. For these reasons, one is forced to consider that the apnea is probably of central origin. We have no evidence, though, of encephalitis, brain tumor or degenerative lesion of intracranial origin. Nevertheless, because of the unusual normality of pulmonary function on normal respiratory movement, we are left with little alternative. So I'm going to be forced, then, to conclude that this patient has cor pulmonale secondary to diminished alveolar ventilation; the cause, most probably, in the central nervous system or, less likely, in obesity.

PATHOLOGIST'S REPORT

Dr. Benjamin E. Konwaler: Ordinarily in clinical pathologic conferences, the clinician feels that he is in a vulnerable position while the pathologist relaxes comfortably. However, in presenting the necropsy findings and clinical pathologic correlation in a case such as this, the pathologist also must feel insecure since his conclusions cannot, for certain, be based upon the morphologic findings.

First, let me say that it is my feeling that this case conforms to those cases which have recently been described in the literature as "heart failure due to extreme obesity," or "obesity heart disease" and have been given the rather startling eponym "Pickwickian syndrome" by Burwell and his group at Harvard Medical School. This eponym touched off a minor literary feud in Boston; and the *New England Journal of Medicine*, in an editorial, was quick to point out that Pickwick, indeed, had none of the important clinical findings associated with this entity but that "an association with Dickens' description of fat Joe as it appeared in the Posthumous Papers of the Pickwick Club would be most appropriate."

A complete necropsy was performed in this case, including examination of the brain, spinal cord, peripheral nerves and muscles. We particularly wished to make sure there were no gross or microscopic findings in the central nervous system to account for this patient's hypoventilation. We found no morphologic changes that could be considered as causing the hypoventilation although there was congestion of the blood vessels and occasionally a small ring hemorrhage was seen. However, the adjacent neurones were well preserved and it was felt that the small hemorrhages were terminal events.

The major pathologic findings were found in the cardiorespiratory system with minor microscopic findings in the liver.

At necropsy, the findings were the classical ones of right sided heart failure with subcutaneous puffing edema in dependent areas, with bilateral pleural effusion of about 600 cc., with pulmonary edema, with ascites of about 800 cc. and with some congestion of liver, spleen, kidneys and blood vessels.

The left lung weighed 600 gm. and the right lung 800 gm. Scattered throughout both lungs, but especially at the bases, were a number of small infarcts. These were firm, dark red, airless nodules that extended to the pleural surface. They were relatively recent and vessels containing organized thrombi could be seen close to the infarcted areas. Another significant finding was the presence of rather pronounced pulmonary atherosclerosis in the larger vessels, but this did not extend into the smaller segmental branches. There was no emphysema noted and no pulmonary fibrosis.

The heart weighed 600 gm. There was striking right ventricular hypertrophy, the right ventricular wall measuring up to 12 mm. in thickness—an unusual amount of hypertrophy and considerably more than we have seen in cases of cor pulmonale. In fact, it was the greatest we ever saw, except in a case of primary amyloidosis of the heart. The left ventricle

was 15 mm. thick. Thus, the increased weight of the heart was primarily due to right ventricular hypertrophy. The coronary vessels showed only slight to moderate atherosclerosis. The ring of the pulmonic valve was somewhat dilated, measuring 8.5 cm. There was no evidence of any intracardiac shunt.

The spleen at 150 gm. was only slightly above the average weight. The liver weighed 1,500 gm. but the cut surface had a nutmeg appearance such as is seen in congestion. Microscopic examination showed frequent bile thrombi in the bile capillaries such as is seen in some cases of right sided failure (about 3 to 5 per cent).

The kidneys were definitely heavier than normal and weighed 500 grams together. This increased weight was apparently primarily due to congestion, for the glomerular capillaries were distended as were all the vascular channels. Many glomeruli showed granular material in Bowman's capsular space, and some tubules contained casts. It was felt that the renal findings were compatible with right sided failure.

The pathologic findings can be summarized as showing cardiac hypertrophy, mainly right sided, with cor pulmonale and right sided failure. No primary basis was found morphologically for the cardiac hypertrophy. There was no emphysema and no pulmonary fibrosis.

In the recent literature on this entity, three reports with autopsy observations have appeared. In all of them necropsy showed cardiac hypertrophy and cor pulmonale. One report showed findings similar to those in the present case, with cor pulmonale, pulmonary arteriosclerosis, recent pulmonary infarcts and absence of emphysema and pulmonary fibrosis. In all the cases there was secondary polycythemia. The presence of polycythemia in obesity is well known, and it may play a part in the conditions that develop. Seide, in his case report, has a chart showing the pathogenesis in these cases. In some of the reported cases there was a complete reversal of findings following sufficient weight reduction. However, some factor other than obesity must also be involved, since this syndrome develops in only a small number of obese persons.

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CASE REPORTS

Volvulus of the Cecum Occurring After Operation—Notes on Additional Etiological Factors and Therapy

ALLAN B. WILKINSON, *M.D.*,
FRANK M. MORGAN, *M.D.*, and
WILBUR G. ROGERS, *M.D.*, Glendale

VOLVULUS OF THE CECUM is a rare form of intestinal obstruction; it has been reported as the cause in from 0.1 per cent to 1.4 per cent of cases of obstruction.[1,3,4,5] The cause has been ascribed to excessively long right colon mesentery,[6] often long enough to permit free movement of the cecum and ascending colon to the mid-line or the left abdomen. In the obstructed cases, the rotation is always described as clockwise, with a fixed point (hepatic flexure or band adhesions) being the fulcrum of rotation.[7] Two possible additional etiological factors are suggested in the following case. Of interest also was the roentgen demonstration of the fulcral point of volvulus near the hepatic flexure.

REPORT OF A CASE

A 46-year-old white woman was examined because of vague "sticking pains" in the left side of the abdomen for the preceding two months and swelling of the lower extremities for five years. The patient had had cesarean section because of placenta previa at age 29. Upon physical examination a tender left upper abdominal mass was palpated and edema of the legs was noted. No abnormalities were noted in the urine and results of blood examination were within normal limits except that 5 per cent of the leukocytes were eosinophils. The sedimentation rate was 22 mm. in one hour (Wintrobe). Intravenous urography showed left hydronephrosis, which was confirmed by retrograde study. The condition was attributed to narrowing of the pyeloureteral junction, possibly associated with aberrant vessels. No intraperitoneal abnormality was noted during these studies. At operation with the patient in right lateral recumbency and a high kidney lift under the right flank, a position that was maintained for two and a half hours, the vessels were removed and pyeloplasty was done. The peritoneal cavity was not opened.

Submitted October 29, 1958.

The progress of the patient was normal for the first 48 hours after operation with normal peristalsis and only slight distention, but on the third postoperative day distention was noted in the lower abdomen. Bethanecol (Urecholine) 5 mg. subcutaneously was given once, then 1:4000 neostigmine, intramuscularly, 3 cc. given five times in 48 hours, and peristalsis became intermittent and painful. On the fourth day, distention had increased, but the temperature was 98.6° and the pulse rate 84. On the fifth and sixth days flatus and stool were passed after rectal irrigations, but there was still pronounced distention and cramping pain continued at intervals. Fluids were being administered parenterally and the urine output averaged 1,400 cc. a day. Vomiting did not occur. On the sixth day leukocytes numbered 10,500 per cu. mm., with 72 per cent polymorphonuclear cells, 9 per cent of them stab form. The total eosinophil count was 100 per cu. mm. Serum albumin was 3.4 gm. and globulin 1.9 per 100 cc. The nonprotein nitrogen content was 25 mg. per 100 cc. On the seventh day because of extreme meteorism, abdominal x-ray examination was carried out and the cecum was observed to be occupying the entire left side of the abdomen. A barium enema was given and the barium progressed to the upper ascending colon, where what appeared to be folds at a point of twist were diagnosed by the radiologist as volvulus of the cecum and ascending colon.

Operation was done immediately. The cecum and ascending colon, enormously distended, lay in the left lower abdomen and a retrocecal appendix lay against the left anterior parietes. The cecal wall, which was gangrenous, was perforated while attempt was being made to find a proper area for decompression with a suction trocar. Fecal spill of 2 to 3 ounces was removed on laparotomy sponges and by subsequent irrigation. Culture and sensitivity tests showed E. coli, and nonhemolytic streptococcus, sensitive to tetracycline but not to penicillin and streptomycin. This information was most valuable in aftercare. After evacuation and detorsion, the point of fulcrum for the volvulus was found near the hepatic flexure, the bowel there being held relatively immobile by omental bands attached to the old scar of cesarean section. The bowel had rotated clockwise about this structure at least 180°. Right colectomy with ileotransverse colostomy was done. Fifteen hundred cubic centimeters of banked blood

TABLE 1.—*Laboratory Data Indicating Response to Therapy After Operation to Free Volvulus of the Cecum*

	Postoperative Day			
	First	Second	Third	Fourth
Albumin per 100 cc.	3.5	4.0	5.3	
Globulin per 100 cc.	1.9	1.2	1.4	
Nonprotein nitrogen per 100 cc.	38	24		
Carbon dioxide combining power (mEq. per liter)	{83 (AM) / 73 (PM)}	63	53	
Packed cell volume (per cent)	46	42		
Potassium (mEq. per liter)	2.4			3.6

was administered during operation. A Harris tube was manipulated into the second portion of the duodenum in order to maintain decompression; 20 hours after operation it had reached the first part of the jejunum.

Postoperative therapy included use of salt-poor serum albumin, vitamins, potassium chloride and limitation of salt. Massive doses of penicillin and dihydrostreptomycin given in the first 36 hours after operation were discontinued and parenteral terramycin was substituted when sensitivity tests were completed. The patient remained asymptomatic after discharge from the hospital with excellent alimentary and urinary function, including return of the left kidney to normal and relief of former constipation.

This case has important etiological, diagnostic and therapeutic connotations. In addition to an exceptionally long right mesocolon with fixation at hepatic flexure, and an omental adhesion, the upward and inward pressure of the kidney lift for two and one-half hours, plus ileus which may follow any abdominal or retroperitoneal operation, caused further displacement of the mobile structure.

Hinshaw[2] said that no similar case was found in a recent review of colonic volvulus at a large metropolitan county hospital. Obviously a competent ileocecal valve contributed to the picture. Whether the administration of a peristaltigenic agent (neostigmine) contributed to the rotation and torsion is conjectural. The clinician must be alert to the possibility of such a postoperative complication in any case, whether the operation was abdominal or remote from the abdomen. A plain x-ray film of the abdomen and barium enema study are of value in any inadequately explained case of postoperative distention.

SUMMARY

Volvulus of the cecum with complete intestinal obstruction is a rare but fatal disease. It is due to an unusually mobile cecum and ascending colon with a normally placed, but exceptionally long, mesentary and some point of fixture about which clockwise rotation of the bowel may occur. The condition may also occur without complete obstruction.

Additional etiological or inducing factors are suggested, namely: (1) Mechanical pressure on the right flank; (2) postoperative ileus with initial displacement of loops of bowel by distention.

540 North Central Avenue, Glendale 3 (Wilkinson).

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Dermatomyositis Treated with Sodium Ethylenediamine-tetra-acetate

R. C. POLLOCK, *M.D.*, *San Bernardino*

DERMATOMYOSITIS is a rare disease, but it has been quite well covered in medical publications. The present case is reported not as a rarity but because of the apparent benefits of a therapeutic agent which seems to bring up questions related to mineral metabolism in this disease.

REPORT OF A CASE

The patient, a 48-year-old, white, married woman, was first observed in December 1954. Two years previously she had first noticed aching of the hands. A year after that the hands became more uncomfortable and stiff, and she also had aching of the feet and back. These symptoms gradually became worse, and she had pains in most of her joints at one time or another, although none of the joints was swollen except for slight enlargement of the metacarpophalangeals. In cold weather the aching in the hands was worse and they would become pale and "tingle." The patient also noted weakness of the hands and arms.

The patient appeared well in general. The face, neck and upper chest were slightly flushed. No abnormality was noted in the heart or lungs. The blood pressure was 140/86 mm. of mercury. Results of abdominal, pelvic and rectal examinations were within normal limits. Brachial and radial pulses

Submitted June 23, 1958.

were normal. The metacarpophalangeal joints were slightly enlarged but not red or tender. The skin of the hands and wrists was pale and tight and felt cold to the touch. If the hands were held dependent they showed excessive rubor. The patient could not completely make a fist owing both to the tightness of the skin and limited motion of the joints. The pedal pulses were good but the feet felt cold, and there were mildly exaggerated color changes of the feet on elevation and dependence.

The sedimentation rate was 41 mm. in one hour (Wintrobe). The blood cell content, the plasma protein-bound iodine content and results of urinalysis were all within normal limits and no abnormalities were observed in roentgenographic and fluoroscopic examination of the chest.

The patient was considered to have atypical rheumatoid arthritis complicated by Raynaud's phenomenon, nervous tension and beginning menopause. She was advised to keep her extremities warm, and administration of estrogens, papavarine and salicylates was begun. The peripheral vascular symptoms were improved but there was no other apparent benefit. A course of phenylbutazone brought no improvement. Intramuscular gold therapy was then used without benefit. In fact the symptoms were getting worse, and the patient was also having considerable pain in the shoulders and hips.

In July 1955 atrophy of the small muscles of the hands was evident, and a diagnosis of dermatomyositis was considered. A biopsy specimen was removed from one of these muscles and the pathologist reported "small focal areas of cellular infiltrate between muscle fibers, loss of cross striation in some fibers and a slight increase in muscle cell nuclei."

Results of laboratory work done in August 1955 showed the bone marrow to be normal, two negative reactions to lupus erythematosus cell tests, skull and chest radiographically normal, no abnormality in roentgen examination of the gastrointestinal tract, stools negative for ova and parasites, urinalysis negative for Bence-Jones protein, a negative serum C reactive protein test, and serum uric acid content within normal limits. X-rays of the hands showed "slight deossification." Urinary excretion of creatine in 24 hours was 925 mg. (normal up to 400 mg. per 24 hours for women). Biopsy of a neck muscle showed changes much the same as in the previous biopsy, except that a perivascular lymphocytic infiltration was also seen. A definite diagnosis of dermatomyositis was made.

In August 1955 intramuscular administration of corticotropin (ACTH) was begun. Supplemental potassium chloride was also administered. The corticotropin definitely lessened the pain, but the patient still required analgesia. Improvement in the manifestations of Raynaud's phenomenon was noted. Testosterone was tried for a while but seemed to have no beneficial effect and was discontinued without apparent detriment.

In December 1955 it was evident, despite facial edema, that there was atrophy of some of the facial muscles. Further atrophy of the hand muscles was also noted, and the lower arm and shoulder girdle muscles had lost substance. This was true to less degree of the muscles of the hips and calves, which were somewhat weak and stiff.

In December 1955 hydrocortisone, 30 mg. a day, was added and there was considerable lessening of the pain. Edema of the face and legs, however, increased despite restriction of sodium intake to 300 mg. a day and occasional administration of mercurial diuretics.

In May 1956 the pains became severe again and the hands were so stiff they could hardly be used. Furthermore the patient had a great deal of general malaise and weakness, and was very depressed. When the author's attention was drawn to reports of benefit in cases of dermatomyositis with calcinosis from the use of a calcium chelating agent, sodium ethylenediamine-tetra-acetate* (Na-EDTA), it was decided to try this agent even though there was no evidence of calcinosis in the present case.

The patient was given a course of Na-EDTA in the hospital, consisting of 2 gm. dissolved in 500 cc. of 5 per cent glucose in water administered slowly intravenously (four hours) once a day for six days. Corticotropin and hydrocortisone were continued. Serum calcium at the time of admittance to hospital was 10.3 mg. per 100 cc. and the serum inorganic phosphate was 4.0 mg. per 100 cc. These values showed no significant change during treatment with Na-EDTA. The 24-hour urinary excretion of calcium was 113 mg. before treatment and was 155 mg. during treatment.

The patient had improved subjectively to a considerable degree by the time she left the hospital, and the motion of her hands and the stiffness of other involved muscles were definitely improved objectively. The skin of the hands felt softer and was considerably looser. After the patient left the hospital, the dosage of corticotropin was reduced to 40 units every other day and of hydrocortisone to 20 mg. a day. Edema decreased, the body weight declining 10 pounds.

In November 1956 the patient had considerable pain in the legs, and her hands felt weak, stiff and sore. Her face was round and finely hirsute. A definite "buffalo hump" was noted. Atrophy of the facial muscles had not progressed. The skin of the hands was still fairly loose but there was atrophy of the small muscles and tapering fingers, and the patient could not quite make a fist. The calves were slightly atrophic and tender, the knees were slightly swollen and there was mild edema at the ankles. At this time hydrocortisone was discontinued and prednisolone was given, 2.5 mg. three times a day. No difference in the symptoms was noted but the body weight again decreased 10 pounds.

In May 1957 the patient began to have a little dysphagia, and a roentgenographic examination with barium swallow showed slight dilatation of

*Distributed as Sodium Versenate® by Riker Laboratories, Los Angeles. Also called ethylene-bis-iminodiacetic acid, and Sequestrene®.

the lower two-thirds of the esophagus and some delay in passage of the meal. Another course of Na-EDTA was given and again there was subjective and objective improvement. Since then she has had two more courses of Na-EDTA and has been able to get along on 40 units of corticotropin every third day and prednisolone 2.5 mg. twice a day.

In April 1958 a complete examination was carried out. Slight hoarseness and some tenderness of some intercostal muscles had developed and atrophy of all the previously involved muscles was evident, and in addition there was also atrophy of the deltoid and interscapular muscles. The "buffalo hump" was barely evident and no edema of the legs was discernible. An electrocardiogram was within normal limits and no abnormalities were noted in x-ray films of the chest and skull. X-ray films of the lumbar spine showed only mild degenerative changes. In the hands there was slight narrowing of the interphalangeal joint spaces, but only slight loss of mineral content of the bones was evident. Results of blood cell count and urinalysis were within normal limits. The sedimentation rate (Wintrobe) was 40 mm. in one hour.

DISCUSSION

Although some investigators have expressed doubt that dermatomyositis is a single clinical entity,[12] the best definition at the present is the broad one offered by Domzalski:[9] "Dermatomyositis is a collagen disease in which nonsuppurative polymyositis with creatinuria is the distinguishing characteristic."

In the past, treatment of dermatomyositis has included use of vitamins, vaccines, vasodilators, analgesics, neostigmine, testosterone and physical therapy. There were no consistent benefits from these agents. In recent years corticotropin and adrenal cortical steroids have been used. In some cases the results are dramatic, and at times apparently life-saving.[4] In a report on one of the larger series it was stated that a little fewer than half of the patients were benefited, and about one-third of those benefited obtained permanent remission.[4] It seemed to McElligott[15] that these agents are most likely of benefit to adult patients with acute disease.

The cause of dermatomyositis is unknown. The most common theories are that it comes about from sensitivity to an antigen, from infection, from endocrine abnormalities, from vasomotor disturbances, from vitamin deficiency, from sensitivity to light or from disorders of metabolism of hyaluronic acid or hyaluronadase.[8,16,18,19] Recently some investigators have conjectured that neoplasms may play an etiologic part. They have postulated that the catabolic products of the neoplasm act as an allergen or toxin which triggers the disease.[8]

The apparent benefit from the calcium chelating agent in the present case brings up consideration of the possibility that calcium metabolism is involved. As far as the author knows this has not been considered in dermatomyositis, although in scleroderma it has been suggested that hyperparathyroidism is a cause of that disease.[2] It is not suggested here that hyperparathyroidism is a cause of dermatomyositis but that an abnormality of mineral metabolism in the tissues may be an etiological factor.

Ethylenediamine-tetra-acetic acid (EDTA) combines with metallic ions in vitro and in vivo to form cyclic complexes which are water-soluble but virtually undissociated. On intravenous injection the sodium salt of this acid (Na-EDTA) binds a portion of the ionized plasma calcium. Rapid infusion will produce a lowering of the plasma calcium level,[17,20] whereas slow infusion in persons with normal levels of plasma calcium will not.[5,11] The resultant bound plasma calcium is inert metabolically, and is rapidly replaced by calcium from the tissues, probably from the bones.[21] (Clarke and co-workers[5] expressed belief that the replacement came from areas of metastatic calcium in the abnormal patients they studied.) The soluble Ca-EDTA is excreted by the kidneys, apparently mainly within the first day. Studies with Na-EDTA and calcium[45] showed a tenfold increase in excretion of calcium in the urine in the first 24 hours.[1] Some observers have noted that the in vivo action of EDTA persists for a long time after use of it is discontinued.[6]

In many of the reported cases large doses and prolonged courses of treatment were used without apparent toxicity. However, EDTA is a potentially dangerous substance, and mild and serious toxic reactions have been reported. At times skin or mucous membrane reactions or nausea have been severe enough to necessitate stopping treatment with it. Local discomfort in the arm in which the infusion is given is common but can usually be controlled by slowing the rate of infusion. Thrombophlebitis in the vein used for infusion occurs sometimes and has led to discouragement in the use of the agent by some.[14] The more severe reactions include death with hypocalcemia and tetany from a too rapid rate of infusion. This reaction can be avoided by using care in the dose and rate of the intravenous flow. Three cases have been reported of death in patients being treated for hypercalcemia.[3,10,20] In these cases rather large doses were given fairly rapidly. At autopsy severe renal tubular necrosis and widespread granulation in the cells of the reticuloendothelial system were noted. A lowering of prothrombin levels in some cases to 50 per cent of normal has also been reported.[10,11] This has nothing to do with the plasma calcium levels. It has been postulated that the renal tubular lesions are due to calcium being freed in the more acid urine of the distal tubules. Hence it is advisable when EDTA is being used to try to keep the urine alkaline and to observe the urine frequently for evidence of hematuria. Also prothrombin levels should be determined often, probably daily, during the use of this agent. Despite these possible serious toxic reactions, when care and moderate doses are used this agent can be given with a degree of safety that justifies its use in selected cases.

SUMMARY

In a case of dermatomyositis without soft tissue calcinosis, corticotropin and adrenal cortical hormones were used in treatment. In addition, a calcium chelating agent (sodium ethylenediaminetetra-acetate, or Na-EDTA was used with apparent benefit.

The in vivo action, therapeutic uses and dangers of EDTA are outlined.

It is suggested that abnormal mineral metabolism in the soft tissues may play an important etiologic part in dermatomyositis.

1700 Waterman Avenue, San Bernardino.

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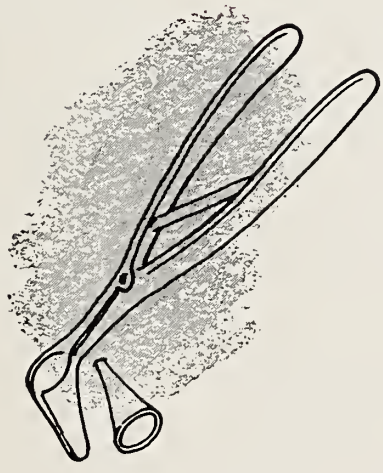
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EDITORIAL

Mr. Forand's Needle

PHYSICIANS IN GENERAL, and those active in sponsoring prepayment medical care plans in particular, were simultaneously shocked and stimulated last year when Rep. Aimee Forand of Rhode Island introduced into the Congress a bill to provide payment for surgical, hospital and nursing home care for citizens of 65 years of age or over.

Commercial insurance carriers demonstrated the same reactions and it was a matter of only a few months before some of them began broadening the narrow base on which they had provided "over-65" health care coverage in selected areas for a period of more than a year before Mr. Forand brought his proposal before Congress. Two companies in California now are writing health care contracts for persons more than 65 years of age.

In December last year the House of Delegates of the American Medical Association demonstrated a prompt and decisive reaction in adopting a resolution which called upon state and territorial medical associations to examine the field of the care of the older citizens and to develop forthwith programs which would guarantee health care benefits for those over 65 with "modest resources and low family income."

Within the three months following the A.M.A. declaration, eleven state or large county medically-sponsored Blue Shield plans have come up with some sort of coverage; at least three more are in the formative stages of additional programs and a number of others are working on their own plans to serve their own citizens in the older age bracket.

While Representative Forand has been pictured in some circles as a do-gooder who would lavishly spend taxpayers' money to coddle one group of citizens, the prompt and widespread development of these plans speaks in a loud tone for the basic area of need which he publicly uncovered.

Physicians and insurance men have long recognized that in the field of voluntary health care coverage a gap existed where the older citizens were concerned. Many plans terminated coverage at age 65. Others dropped the member when he ceased his employment because of age or disability. Some, it is true, allowed retired members of enrolled groups to continue under individual coverage, generally with increased dues payments and decreased benefits. Overall, however, the member who reached age 65 found himself either without health care coverage or with minimum coverage at maximum rates—at a time when his health needs were increased and his financial resources decreased.

Without going into a lot of statistics, we must face the obvious fact that the over-65 age group is today a sizable segment of our population and the proportion is constantly increasing. We must also face the fact that because of degenerative diseases, bone fragility and other ills inherent in older people, this age group requires much more health care than the general population. Estimates show that from two to three times as much medical and hospital care is needed for the older age group as for the average citizen in the lower age brackets.

Statistics also show that these people live on incomes which are considerably reduced from those they had during their active working days.

The combination of increased need for health care, decreased incomes and lack of insurance coverage to meet health needs was bound to set up a volatile problem which demanded a solution. Mr. Forand, through his legislative proposal, has placed his public finger on this problem and caused a great deal of searching of souls and for solutions.

Today's situation is not a new thing. Our own California Physicians' Service was born out of just such an exigency. While politicians may claim that C.P.S. would never have come into being except under threats of state medicine, it is obvious that

medical leaders were aware of the problems which demanded its birth; they were doubtless hurried in their progress by the legislative prodding.

Fortunately, the answer to the health needs of older citizens can be based on much more complete and accurate information than could the start of C.P.S. twenty years ago. In the intervening years C.P.S. has developed a wealth of actuarial background and can today calculate with fair accuracy the cost of providing any particular type of coverage.

At the same time, the actuarial picture for the older age group must be recognized as probably the most obscure part of the complete mural of figuring costs, simply because this group has heretofore been largely excluded from coverage. This exclusion now kicks back by denying access to experience figures. As a result, plans for these people are bound to be more or less experimental at the outset.

In California much thought has been given to the problems of the older citizens, a process which has gone on for some time but which has been rapidly accelerated in the past few months. The C.M.A. Council has studied the situation at length and has developed a set of basic principles which would, at one time, provide adequate health care services for older people and make these services available at a price the beneficiaries could afford to pay out of their own resources or through the largesse of friends or relatives.

The Council turned its findings over to the House of Delegates a few weeks ago and found ready acceptance of the principles by that body. The details were left to C.P.S.

C.P.S. has, with commendable promptness, suggested a plan which will soon be offered on an experimental basis in some areas of California. The plan would offer access to professional services at reasonable rates for those in the older age group with limited incomes. It would also provide a measure of co-insurance as a means of preventing abuse and preserving the dignity of the individual. It would also establish a level of professional fees which would not backfire against the profession in the event future groups of needy citizens are made the subject of additional demands upon society.

Details of the C.P.S. program will appear in future issues and will be adequately publicized for the information of the profession. Basically, they seem to offer an adequate provision of professional services for the older age group and to set a price within reach of this group. Should an underwriting loss occur in the pilot program, C.P.S. has agreed to meet part of such loss and the House of Delegates has authorized the Council to assume a part of the financial drain.

One item in the Council's recommendations concerned the determination of a proper retirement age. It suggested that age 65 should not be considered an arbitrary retirement point and the press has lauded that declaration.

Today, the aged group is receiving a lot of attention and tomorrow appears to be eligible for insurance protection against the costs of illness. The medical profession in California may well be proud of the part it is playing in this nationwide response to Mr. Forand's needle.

New C.M.A. Secretary

THE Council of the C.M.A. at its March 14 meeting accepted, with deep regret, the resignation of Dr. Albert C. Daniels as Secretary of the Association. Al has served in this capacity for the past eight years and has turned in a consistently fine performance, both as Secretary and as chairman of the Committee on Scientific Work. His resignation as Secretary was brought about by the pressure of other obligations.

Fortunately, amendments to the By-Laws now permit the separation of these two offices and Dr. Daniels will continue in charge of the scientific programs. In this work he is bound to continue to serve the Association as ably and as devotedly as he has in the past.

To succeed Dr. Daniels as Secretary, the Council has named Dr. Matthew N. Hosmer, an otolaryngologist in San Francisco. Matt brings to the Association a long background of active and effective work on committees and as an officer, eventually president, of the San Francisco Medical Society. His choice appears to assure the C.M.A. of a dedicated and able physician as Secretary, a post with few direct responsibilities but one which adds materially to the thinking processes and abilities available to the Council in its deliberations.

Guides suggested BY MEDICAL SERVICES COMMISSION FOR USE BY C.M.A. COUNCIL AND OFFICERS

1 *The Objectives of the California Medical Association are to promote the science and art of medicine and the betterment of public health. The pursuit of these objectives will require an understanding of the social and economic conditions relating to health and medical care.*

2 *Persons who are receiving help in meeting medical care costs through third-party participation should assume some continuing personal financial responsibility in those costs. At the same time, the C.M.A. recognizes that certain segments of the population are, of necessity, covered by the service concept.*

3 *The California Medical Association should institute a suitable continuing educational program to separate and identify in the public mind the cost of physician services from other ancillary costs in the field of health care.*

4 *The California Medical Association and each of its constituent county medical societies should actively participate with all interested parties in the regulation, improvement and availability of ancillary services in the field of health care.*

5 *Appropriate active and authoritative local committees are the most useful means of avoiding and controlling possible abuses of the insurance mechanisms.*

6 *The patient's right freely to select or change his physician should be preserved in the patient's interest, and any interferences or restriction on the patient that is adverse to his welfare should be opposed.*

7 *Physicians must have the right to select their method of practice, without coercion, provided they respect legal and ethical rules.*

8 *Wherever state or federal law requires the development of methods and fees for the care of individuals by private physicians, it should be the duty of the C.M.A. Council or its authorized representatives to review and advise in the development of such contracts for physicians who choose to participate or whose patients must participate, and award or withhold Council approval.*

Approved by the Council at 445th meeting, February 21-25, San Francisco.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Like age itself, the medical and social problems raised by the great proportional increase of aged persons in the general population have come upon us with dismaying suddenness. The medical profession has an interest, a duty and a stake, professional and civic, in the best solution of these problems.

Since what the medical profession thinks now and says now and does now must have importance for a long time to come, we publish here in full a report of a study made by a special committee of the California Medical Association. The report was approved by the Council and the House of Delegates of the Association in February, 1959.—Editor.

Care of the Aging

Report of the Special Committee on Aging to the Council of the California Medical Association, February 21, 1959, San Francisco

COMMITTEE ORGANIZATION AND FUNCTION

At the January 11, 1959 meeting of the Council, the following resolution was adopted:

"*Resolved:* That a committee of not more than five members of the Council be appointed for the purpose of: (1) Conferring with interested insurance companies, (2) Conferring with appropriate committees of the C.M.A. and administrative staff, (3) Conferring with hospital associations and other ancillary professional organizations, in order to propose to the House of Delegates a positive program on the part of the C.M.A. for development of an over 65 age group program to meet the proven needs for medical and hospital care of the aged populations;

"This committee to report to the next Council meeting."

The following committee was appointed to consider and to implement this resolution: Ralph Teall, Gerald Shaw, Samuel Sherman, James MacLaggan, and T. Eric Reynolds, chairman.

The committee had as consultants the following: The Executive Committee of the Commission on Medical Services, composed of Francis J. Cox, chairman of the Commission on Medical Services; H. Dean Hoskins, chairman of the Committee on Fees; Henry Gibbons, secretary of the Medical Services Commission; Thomas Elmendorf, chairman of the Committee on Indigent and Aged; John Morrison, chairman of the C.P.S. Study Committee; John Rumsey, chairman of the Committee on Government Financed Medical Care; Malcolm Watts, chairman of the Committee on Public Relations, and Mr. Geoffrey Heller of California Physicians' Service.

The committee held three meetings, during which discussions were held with: (1) Dr. Otis Whitecotton, director of the Alemeda County Hospital; (2) Dr. Richard Johnson, member of the Citizens Advisory Committee on Aging; (3) Mr. William

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Siegel of the Association of California Boards of Supervisors; (4) Mr. M. J. Nietschmann, manager of the Accident and Health Department of the Continental Casualty Company.

FINDINGS

Studies of the medical care needs of those 65 and over have been conducted by the C.M.A. through its committees and by others throughout the years.

A summary of California's aging population[1] states as follows:

As might be expected, the aged are less healthy and require more medical care than does the population as a whole. Compared with the whole population, the aged have on the average twice as many chronic conditions causing one or more days of disability during the year, and more than twice as many restricting the person's activity in some way.

Persons 65 years and over report an average of 65 days per year in which, because of disabling conditions, they cannot carry on usual activities, while the total population reports an average of 24 such days. Hospital days are reported as averaging about two days per person for those over 65 while those under 65 average just less than one day per person.

Aged females have higher illness rates, but utilize hospitals to a lesser extent than do aged males. Home nursing care is provided for an average of 65 of every 1,000 elderly persons, while the rate is only five per 1,000 for persons under 65 years old.

The survey shows that 43 per cent of the over 65 population reported yearly family income of less than $2,000. (Today's estimate is $2,500 per couple and $1,230 per individual.*)

The following summarizes pertinent economic information about California's aged population:

Today in California there are an estimated 1,217-000 persons 65 and over. Of this group, 60,000 (5 per cent) are in institutions (450 penal, 11,500 mental, 24,500 in homes for the needy, 23,700 in homes and hospitals for chronic ill, handicapped and other). Of the 1,157,000 remaining, 799,000 are recipients of OASI—266,000 are recipients of OAS—20,000 are recipients of county general relief —approximately 343,000 are employed, of these (1,157,000) 106,000 (9 per cent) are veterans and 373,000 (31 per cent) have some type of insurance.* (40,000 are now covered by C.P.S.)

On a national basis, in 1957, about three out of every eight persons aged 65 and over had some form of voluntary health insurance.[2] The development and availability of extended coverage—beyond employment years—by Blue Shield, Blue Cross and some commercial insurers, has contributed materially to this present prepayment coverage.

Although it is apparent that substantial progress has been made, nevertheless, the medical profession must continue to assist in the development of prepaid medical care insurance to aid those people who can afford to purchase it.

California can well expect a continuing increase, probably above national levels, of people in the over 65 age group. In 1953, this group comprised 8.3 per cent of the state population and received 15 per cent of the total of all physicians' services. By 1980 this percentage is expected to rise to 25 per cent or more.[3]

Data on private facilities for care of these people is difficult to tabulate, but some work on gathering it has been done.[4] In addition, there are 646 licensed nursing homes supervised by the State Department of Public Health; 9,360 acceptable beds for the long term care of the chronically ill in 53 county institutions.[5]

The State Department of Social Welfare supervises family boarding homes and institutions for the physically and mentally normal aged. The State Department of Public Health is in charge of licensing nursing, convalescent and rest homes for the aged. Sanitaria, nursing and rest homes for the mentally ill are under the State Department of Mental Hygiene.

There is need for more information on the needs of this group of people and the facilities and resources for meeting them.

CONCLUSIONS

1. The C.M.A. should continue to join other organizations in identifying the medical care needs of the 65-plus group in California. C.M.A. should emphasize its belief that these needs can be met on a local level, without federal intervention.

2. There is need for more adequate and up-to-date information.

3. There is need for a continuing study program on the part of the C.M.A. and its component county medical societies.

4. The basic responsibility for meeting the problems of aging lies with the citizens of each community.[6]

5. For those not able to purchase their medical and hospital needs, other solutions have been available in this state since 1870. Our county and state hospital system has some of the finest physical facilities and equipment available anywhere. Approximately one-third of the hospital days for those 65 and over are provided in county hospitals. Adminis-

*C.P.S. Research.

tered on a local level, the county hospitals are most responsive to the needs of the communities they serve. This program is sound and continues to receive the endorsement of C.M.A.

RECOMMENDATIONS

This committee recommends:

1. That C.P.S. be authorized and directed to develop realistic prepayment programs for the aged in California and to report back to the Council. Such programs might contain the following essential features, provided such features are actuarially sound and feasible.

(a) Available to all persons 65 and over on a statewide basis.

(b) Itemizing the cost of professional services and hospitalization (if covered).

(c) Utilize the accepted Blue Shield principles with a realistic income ceiling and a related fee schedule.

(d) Utilize, if practical, a method of co-insurance appropriate for people with modest resources.

(e) Those county medical societies that are willing and able to, should be permitted to participate in this program by exercising local control by use of local claims processing as agents for C.P.S.

Should it be necessary for C.P.S. to request some type of financial guarantee against unusual losses in reference to this particular program, it should make a detailed analysis to the Council about such a proposal. If at all possible, however, such a program should be self-supporting on its own merits.

2. That C.P.S., as the California Blue Shield Plan, cooperate with the National Blue Shield Association program for the aged, to the extent permitted by California conditions.

3. That the C.M.A. urge expansion of extended medical insurance coverage to those reaching 65 who are retiring.

4. That the Council urge the Commission on Medical Services of the C.M.A. through its appropriate committees, to expedite the development of a continuing study in this field.

5. That the Council urge each component county medical society to establish a Committee on Medical Care of the Aged. Such a committee should determine the availability of all facilities and needs for care of the aged in its county. Where practical and appropriate it should confer with representatives of all groups or organizations having factual information relating to the medical care needs of the aging.

6. That the C.M.A. promote and encourage the development of voluntary programs to meet established needs. These programs, we believe, can be as effective as any governmental program and cheaper in cost.

7. That the C.M.A. urge that the present concept of mandatory retirement at age 65 is medically unsound and should be abandoned. The mental health of the majority of persons who still provide for their families and assume community responsibilities as well as the economy of the nation is well served by permitting the employment of these people.

8. The Committee recognizes that the A.M.A. has recommended: "Greater use of Hill-Burton Construction Act Funds in building nursing homes and chronic disease units of general hospitals; extension of an FHA type loan to nonprofit and proprietary health facilities serving the aged." The need for more trained personnel, nursing aides, is also obvious. The committee urges development of training programs, in cooperation with the California Association of Nursing Homes, Sanitariums, Rest Homes and Homes for the Aged, Inc., and other interested groups to help alleviate this shortage.

9. That the C.M.A. cooperate with the California Association of Nursing Homes, Sanitariums, Rest Homes and Homes for the Aged, Inc., State Department of Public Health, State Department of Social Welfare, and State Department of Mental Hygiene, in developing ways to raise the standards under which nursing homes are operated.

Respectfully submitted,
T. Eric Reynolds, M.D., *Chairman*

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Are We Making the Same Mistakes British Doctors Made?

This British GP Thinks So

Almost every doctor who visits England comes back wanting to write an article or give a speech about socialized medicine. Because there has been so much said so many times on the subject, it has lost much of its interest.

Yet, the headquarters of the California Academy of General Practice in San Francisco recently had a visitor from England who had some startling, frightening things to say of interest to every American doctor.

The visitor was Dr. Alastair J. Marshall, Luton, England, who is visiting in this country under a Ford Foundation Grant. As an area executive in the British Medical Association and on the executive area council (one-third physicians, two-thirds laymen) for the national health system, Dr. Marshall can competently speak on this subject. Here are some of the questions presented to Dr. Marshall by the Academy's Executive Secretary Bill Rogers.

Did the doctors try to get together to present a united front against socialization?

Indeed they did. The British Medical Association polled the doctors and stated the act was completely unacceptable. In an initial poll only 17 per cent indicated they might favor or go along with the national health act.

When the government was faced with the prospect that 83 per cent weren't going to participate, what did it do?

They shot back at the B.M.A. saying they proposed to go ahead with the 17 per cent who would participate. They pointed out to the negotiators that the first people signing up would be given immediate seniority, that pensionable rights would be from that day. But the thing that really bulldozed the doctors was that during a very limited period the government offered to buy the "goodwill" of the practices of doctors who would sign up. When they re-polled the doctors after this was announced 47 per cent said they would sign up.

Do you have any idea how many of the doctors are specialists in England?

About one-seventh or one-eighth are specialists.

Has nationalization had any effect upon the number of doctors entering general practice or the specialties?

Initially there was a rush of people into specialty ranks because it appeared they were going to do considerably better. Now, everything is in a state of confusion. These young people having spent as many as 10 years as registrars (they work in hospitals as residents at a very low salary) find there are no jobs available. Many of them would like to get into general practice but find that general practitioners aren't anxious to have them either. The internists have the biggest problem.

The average GP in this country does obstetrics, pediatrics, common surgery and medicine. How does this compare with the GP in England?

Well, we do no surgery at all—the specialists have succeeded in seeing that no general practitioner has access to any hospital. The people are now conditioned to expecting specialist surgery. We do obstetrics. Most of it. That's not because the government thinks it's a good idea but there have been no hospitals built and there are no places to put these people. We know their intention is to take obstetrics away from us too once they get hospitals built.

How many GP's had hospital privileges before the government took over?

Many.

I've heard you have a bed shortage. Do you agree?

Yes! Our patients expect to wait two years for the removal of tonsils, two or three years for a chronic appendix; they will certainly wait that long for a gall bladder or a gastrectomy. Emergency surgery is done just as it was before when it is needed.

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You would think this would produce a lot of private work.

True, but it is mostly in the consultative field.

Do you think socialization was forced mostly by the Labor government?

No. They brought it in but it was a coalition government that started the program. Winston Churchill himself welcomed the advent of the national health service.

How have drug manufacturers fared under socialization?

Initially, very well. Now they are finding more of a "hard sell." The first few years it was wide open and anybody could prescribe anything they liked. As soon as costs rocketed the government made restrictions. Now doctors are very wary about prescribing new products since the doctors may end up having to pay for the drug themselves The drug companies must enter into price agreements. In fact we get directives not to use certain drugs because the companies have not entered into agreement.

How many patients a day do you see now—how many were you seeing before?

Because of my commitments I have a full list and have 3,600 patients. Any patients above that I'm not paid for. Sometimes I'm forced to take on new patients such as when twins are born to a family and if I'm a friend of theirs and want them to remain as my patients. I get in my office around 8:30 in the morning and will work until noon and will see 40 to 50 patients. I'll certainly see 50 or 60 in the evening. I'll have 20 to 30 home visits. This makes a total of about 120 to 140 a day. In the old days I used to see around 35.

What's the basis of your payment?

I'm paid solely on the basis of number of patients on my list, not the amount of work I do. Besides this we're paid 65 cents for a series of immunizations and we receive a delivery fee of $21. There is nothing else we get paid for.

If the government doesn't like the way you practice what can they do about it?

They can fine you after a warning. They'll do this if a patient complains you were rude, wouldn't make a house call or if the government inspectors don't find your office up to par. They will also fine you for prescribing a drug which is not approved by them.

Are hypochondriacs a problem?

They're a dreadful problem. We're knee-deep in them. The national health system has increased the neurotics considerably.

Why don't you refer some of these patients to a psychiatrist?

It's almost impossible to find one. The psychiatrists are few and far between.

But you can dismiss patients, can't you?

Yes, but I have to consider my pocketbook, family—and reputation.

Do you think the majority of the public is satisfied?

This is difficult to assess because of the conditioning everybody had with the emergency medical service during the war. I don't think they are satisfied or dissatisfied. The majority just don't seem to care.

Under such a plan as this people are getting more medical care than ever before. If you discount what it's costing do you think they're getting better care than prior to 1948?

Oh no. The over-all care probably is better because of those who couldn't afford any kind of care before. But almost every doctor will admit that the quality of his work has deteriorated, simply because of the mass of people that seek medical advice even for the most trivial complaints.

What effect has this had on medical education?

Well, the government was smart. When the national health act first came in they also brought in an education act which made it easier for anyone to go into medicine. In the last two years it has become very apparent this lovely "springtime" has fallen flat. Now there is a falling off of people going into medicine. I would certainly not advise my son to go into medicine today.

Where do you feel you British doctors made your biggest mistake in letting the government take over?

We were not unified and simply didn't stand firm against the government. Our lines were broken here, there and everywhere. We all feel the government would never have gone ahead with this system if we had any unification within our ranks. But ours being an individualistic profession everybody had ideas of their own and you never could get three people to agree with each other.

How effective has the B.M.A. been in getting reforms and improvements?

Rather ineffective. The trouble is it's always approached the government completely on *ethical* lines.

Now about 80 per cent of the doctors belong to what we call a "guild." I suppose you might call it a union, but we don't like that term for a professional group. Because of its charter the B.M.A. is not allowed to participate in politics and that's the reason we had to form the guild. The B.M.A. could have been much more effective if it had the power we have given to this British Medical Guild.

How does the guild work?

It really hasn't had an opportunity to work yet. Each doctor, however, has signed a firm pledge that he will abide by the actions of the guild. If doctors are going to let each other down, then we might as well forget about the whole thing. If the guild should ask its members to resign in any given area, it will upset the entire national health plan and will be a very strong bargaining force. We'd continue to see our patients, of course, at a very low fee but would refuse to do any of the paper work. The doctors in the rest of the country would be contributing to the general fund of the guild to help support the doctors who won't be receiving anything from the national health fund. We have just about discovered the only way to fight a government is through trade union rules.

As in England there are a few doctors in this country who would not oppose government control in medicine. What advice would you give to the majority who want to see freedom in medical practice maintained?

I only wish that the A.M.A. could finance a tour to send those doctors (who would favor a national health service) to England. Idealistically it's a wonderful thing that everybody can have free medical care and attention. But in practice it just doesn't work. The cost has rocketed about three times what it was thought the maximum costs would be. The government obviously didn't realize so many people would take advantage of it and take advantage of it so often.

What would you guess the gross annual income is for a general practitioner?

As a single practitioner his gross would probably be between $8,000 and $10,000 a year. Out of this he would have to pay for his office, equipment, car, his secretary, utilities and tax which would bring him down to a net of $5,000 to $6,000 a year. In a group a doctor can do better since he shares expenses.

What about the incomes of specialists?

From the government most of them get, depending on the amount of hours they put in, around $10,000 a year. This gives them quite a bit of free time for consultative practice so they can do much better. Oddly enough they get the same income no matter what their specialty is. The eminent brain surgeon will receive just as much as a dermatologist. Internists have the biggest problem since there are many more of them than there are positions open. Those working in the hospitals waiting for a consultative post to open (some have now been waiting ten years) make around $5,000 a year.

From your travels in this country do you feel we are following in your footsteps?

Unfortunately, yes. I feel the same pattern is reproducing itself here. And what is more I have seen very little evidence of your profiting by our mistakes. There is a similarity in the way governments work and you could learn much from our example.

I know you are acquainted with our Forand Bill. From your experience how do you think American doctors should approach this type of legislation?

If American doctors don't feel this is the best type of medicine for their patients they should oppose it now. But you can't do this unless you're unified—and you are *not* unified. If you Americans benefit from our experience you'll remember the words of your own Ben Franklin: "We must all hang together, or assuredly we shall all hang separately."

What is your hope for the future as far as England is concerned?

I think it's more than a hope. Within the next two years there will have to be considerable modification or we will quit. Having had 10 years of this we are much more united now than we were in 1948. At this very moment the government and the medical profession have reached a deadlock. We were on the verge of a walkout when the government set up a Royal Commission (an independent body of prominent lay citizens) to appraise the entire program. We are now waiting for the report of the commission to see what we'll do.

Do you think most British doctors would share the views you've just expressed?

Definitely. I prepared a talk expressing most of these views before I left. To get reactions I showed a copy to both a conservative and then to a very socialistic minded doctor. Both agreed with *everything* I said. But this was what was interesting. The conservative added: "If you have any influence on American doctors you will be moving them along toward socialism." While the socialist exclaimed: "If American doctors should really take to heart what you've said, socialization of medicine in the United States could be set back 50 years."

Council Meeting Minutes

444th Meeting

Tentative Draft: Minutes of the 444th Meeting of the Council, Los Angeles, Statler Hilton Hotel, January 10 and 11, 1959.

The meeting was called to order by Chairman Lum in the Boston Room of the Statler Hilton Hotel, Los Angeles, on Saturday, January 10, 1959, at 5:00 p.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron, and Councilors Wheeler, Todd, Foster, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Harrington, Davis, Sherman, Lum, Bostick and Teall. Absent for cause, Secretary Daniels, Editor Wilbur and Councilor MacLaggan.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Thomas, Clancy, Whelan, Marvin and Collins and Dr. Walter Batchelder and Mrs. Margaret Griffith of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; Messrs. Read and Salisbury of the Public Health League of California; county society executives Rosenow, Field and Pettis of Los Angeles, Bannister of Orange, Nute of San Diego, Geisert of Kern, Neick of San Francisco, Thompson of San Joaquin, Donovan of Santa Clara and Dermott of Sonoma; and numerous physicians as officers of county societies and in other capacities, including Doctors Roberta Fenlon, E. E. Wadsworth, Jr., Malcolm Merrill, O. C. Railsback, Justin J. Stein, J. J. Crane, Lewis Bullock, Dudley Bell, Robert L. Day, Herman Stone, George J. Budd, John R. Peterson, George Maner, William Gardenier, Horace Sharrocks, Thomas J. Rossitto, William F. Quinn, and others.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 443rd meeting of the Council, held December 13, 1958, were approved.

2. *Membership:*

(a) A report of membership as of January 8, 1959, was presented and ordered filed.

The executive secretary reported that the Association's membership as of December 31, 1958, indicated the possibility of an allotment of one additional delegate to the American Medical Association in 1959.

(b) On motion duly made and seconded in each instance, three applicants were voted Associate membership. These were: Louis E. Blachman, Donald L. Martinson and Hume Anthony Thomason, Los Angeles County.

(c) On motion duly made and seconded in each instance, four applicants were voted retired membership. These were: Stuart A. Cameron, E. C. Ehlers, San Bernardino County; K. S. Eymundson and Marius A. Francoz, San Francisco County.

(d) On motion duly made and seconded, reductions of dues were voted for six members because of illness or postgraduate study.

3. *Financial:*

(a) A report of bank balances, loans, etc., as of January 8, 1959, was presented and ordered filed.

(b) Dr. Heron, chairman of the Finance Committee, presented a budget for the 1959-1960 fiscal year which had been considered by the committee. Discussion was held on various items in the budget and it was agreed that it would come before the Council at the next meeting for approval. It was also agreed that copies should be forwarded to the members of the appropriate committee of the 1959 House of Delegates for their review prior to the 1959 Annual Session.

4. *Commission on Medical Services:*

(a) Councilor Harrington reported on a meeting held with pharmaceutical representatives, at which agreement was reached on limitations on antibiotics prescriptions in public welfare cases and also on the maximum cost of prescriptions in such cases.

(b) Mr. Hassard reported, in behalf of Dr. Cox, that it was proposed to present to the Industrial Accident Commission of the State of California a request for an upward revision of portions of the fee schedule applicable to industrial injury cases and that actuarial services would be required in this connection.

On motion duly made and seconded, it was voted to authorize the Commission on Medical Services to prepare and present to the Industrial Accident Commission an application for a revision upward of portions of the minimum medical fee schedule.

On motion duly made and seconded, it was voted to authorize the Commission on Medical Services to retain the firm of Coates, Herfurth & England as actuarial consultants in connection with this application.

(c) Mr. Thomas reported that a subcommittee of the Committee on Rehabilitation seeks to determine the need for rehabilitation facilities and, to this end, wishes to use the services of a consultant, at no cost, to assist in preparing the outline of an investigative procedure and an application for supporting funds from an outside foundation. After discussion, this procedure was approved.

5. *Commission on Public Health:*

Dr. Bostick reported on the consideration already given to matters concerned with student health pro-

grams in state colleges and suggested that this matter be referred to the Committee on School Health. On motion duly made and seconded, this referral was approved.

6. *Commission on Professional Welfare:*

Dr. Kirchner reported that a proposed article on tetanus immunization had been prepared and suggested that it be referred to the editor for possible inclusion in CALIFORNIA MEDICINE. On motion duly made and seconded, this proposal was approved.

7. *Public Relations:*

Mr. Ed Clancy reported, also on tetanus immunization, that a report on a program of immunization put on by the Orange County Medical Association was in preparation and copies would be sent to all members of the Council.

8. *Committee on Committee Nominations:*

Dr. Bostick presented the committee's proposed list of commission and committee nominations, which, after discussion, was approved. On motion duly made and seconded, it was voted to discontinue the Committee on Medical Economics and the Committee on Medical Education and Hospitals, since the functions of those committees were adequately covered by other committees. It was also agreed that the Committee on Blood Banks should meet during the coming year to reevaluate its functions and report back to the Committee on Committee Nominations.

Dr. Bostick also reported that Doctors Frank West (chairman), E. E. Wadsworth, Jr. and Bert Halter had accepted appointment to a special committee to work on the subject of physicians' hospital relations and to maintain liaison with the California Hospital Association.

Dr. Bostick also reported that Doctors Paul I. Hoagland and Bert Halter and Mr. Guy W. Wadsworth, Jr. had been selected for nominations to succeed themselves as members of the Board of Trustees of California Physicians' Service and Doctors Angus C. McDonald of Los Angeles and John E. Vaughan of Bakersfield had been chosen to be nominated for this board in place of two physician members not eligible for reappointment to the board. On motion duly made and seconded, these nominations were approved.

9. *Legal Department:*

Mr. Huber reported on a suit filed in federal court in which the Association is named as one defendant. Legal counsel will handle the case.

10. *Representation at A.M.A. Meetings:*

On motion duly made and seconded, it was voted to include the President, President-Elect and Council Chairman or his designate among those attending meetings of the American Medical Association and to adjust the 1959-1960 budget accordingly.

11. *State Department of Public Health:*

Dr. Malcolm Merrill, State Director of Public Health, reviewed some of the topics included in the 1958 annual report of his department. These included receipt of a grant of $160,000 for a study of childhood accidents, which claimed the lives of 1,100 children under the age of 15 years in 1958. They also showed a decline to only four cases of human rabies from dog bites, compared with 47 in 1957 and 146 in 1956. Both birth and death rates were slightly lower than in 1957. Poliomyelitis immunizations appeared to be about 85 per cent effective for those who completed the series of three shots.

On motion duly made and seconded, it was voted to affirm the action taken by the A.M.A. House of Delegates on December 4, 1958, in regard to physicians and state and county medical associations cooperating with public health authorities to secure a greater public participation in polio immunization campaigns.

12. *Office of Coroner, Los Angeles County:*

Dr. George Maner of Los Angeles reported on charges which have been filed against the coroner of the county and which, if sustained in court, would prohibit pathologists from retaining portions of tissue taken during postmortem examinations.

He suggested that legislation to clarify the authority of pathologists to retain such tissues be introduced into the State Legislature and, on motion duly made and seconded, this proposal was approved.

On motion by Dr. Bostick, duly seconded, the following resolution was adopted:

WHEREAS, In the conduct of postmortem examinations by pathologists or other physicians, either in hospital practice or in coroners' offices, it is essential that tissue specimens be retained or stored for microscopic examinations or other examinations, and be available either for review by other physicians, or by the parties in case of litigation, or for verification of findings; and

WHEREAS, Destruction of such tissue specimens and stained microscopic sections and paraffin blocks would impede the development of pathology, limit the scope of examination and scientific investigation as to the causes of death and thus be detrimental to medical progress and not in the best interests of the public health; and

WHEREAS, Under certain circumstances the destruction of such tissue specimens, stained microscopic sections and paraffin blocks would deny to the parties in case of litigation the right of review

of vital evidence and thus thwart the purposes of justice; and

WHEREAS, The destruction of such vital evidence would be detrimental to the public welfare and the administration of justice; therefore, be it

Resolved: That the California Medical Association condemns such practices and pledges to use its moral influence and such other resources as it may deem advisable, in defense of the principle that in the conduct of postmortem examinations, microscopic examination and retention of tissue specimens is essential to the best interest of the public health, public welfare and medicine.

On motion duly made and seconded, it was voted to support the medical examiner system in which certified pathologists are in charge of postmortem examinations.

On motion duly made and seconded, it was voted that

1. The C.M.A. Council approves the efforts of the Los Angeles County Medical Association in support of the pathologist system of coroners' office operations; and

2. The C.M.A. Council stands ready to indemnify the Los Angeles County Medical Association for expenses incurred in this effort.

13. *Committee on Postgraduate Activities:*

At the request of Councilor Foster, Dr. Edward C. Rosenow, Jr., chairman of the Committee on Postgraduate Activities, reported that an adverse reaction had been received from some medical schools on the Council's earlier decision to allow commercial exhibits at postgraduate institutes.

On motion duly made and seconded, it was voted to reconsider the action taken earlier.

On motion duly made and seconded, it was voted to revert to the policy position in effect in earlier years, providing that commercial exhibits shall be permitted at postgraduate institutes if the exhibitors and their products are first cleared through the Advertising Committee and if all funds accruing from such exhibits come to the Association.

14. *Legislation to Benefit the Aged Population:*

Dr. Reynolds discussed the alternatives open to the medical profession in facing the anticipated introduction of legislation to provide special medical and hospital services for the segment of the population above the age of 65 years. On motion duly made and seconded, the following resolution was adopted:

Resolved: That a committee of not more than five members of the Council be appointed for the purpose of

1. Conferring with interested insurance companies,

2. Conferring with appropriate committees of the C.M.A. and administrative staff,

3. Conferring with the hospital association and other ancillary professional organizations in order to propose to the House of Delegates a positive program on the part of the C.M.A. for development of an over 65 age group program to meet the proven needs for medical and hospital care of the aged population;

This committee to report to the next Council meeting.

Chairman Lum read a message received from an insurance carrier which has introduced a contract for medical and hospital service costs for the aged population. On motion duly made and seconded, it was voted to refer this message to the Commission on Medical Services.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 12:50 p.m.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

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445th Meeting

Tentative Draft: Minutes of the 445th Meeting of the Council, Sheraton-Palace Hotel, San Francisco, February 21 to 25, 1959.

The meeting was called to order by Chairman Lum in the French Parlor of the Sheraton-Palace Hotel, San Francisco, on Saturday, February 21, 1959, at 9:30 a.m.

Roll Call:

Present were President West, President-Elect Reynolds, Speaker Doyle, Vice-Speaker Heron, Editor Wilbur and Councilors MacLaggan, Wheeler, Todd, Foster, O'Neill, Kirchner, O'Connor, Shaw, Pearman, Harrington, Davis, Sherman, Lum, Bostick and Teall. Absent for cause, Secretary Daniels.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Thomas, Clancy, Collins, Marvin, Whelan and Salisbury and Dr. Batchelder of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; Ben H. Read of the Public Health League; county society executives Scheuber of Alameda-Contra Costa, Jensen of Fresno, Rosenow, Pettis and Field of Los Angeles, Bannister of Orange, Foster of Sacramento, Nute of San Diego, Neick of San Francisco, Thompson, Pearce and Monnich of San Joaquin, Wood of San Mateo, DeVere of Stanislaus, Donovan and Colvin of Santa Clara; Doctors A. A. Morrison, A. E. Larsen and William Gardenier of California Physicians'

Service; William Rogers of the California Academy of General Practice; Doctors J. J. Stein and Dan Morton of the dean's office of UCLA; Dr. Malcolm Watts of the dean's office of UC; Dr. Marshall Porter, State Director of Mental Hygiene; Doctors Dan O. Kilroy, Carl Moore, John Vaughan, Clarence H. Albaugh, Elizabeth Mason-Hohl and other physicians who attended portions of the meeting.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 444th meeting of the Council, held January 10-11, 1959, were approved.

2. *Membership:*

(a) A report of membership as of February 17, 1959, was presented and ordered filed.

(b) On motion duly made and seconded, seven delinquent 1958 members were voted reinstatement.

(c) On motion duly made and seconded in each instance, 28 applicants were voted Associate Membership. These were: Wm. L. Anderson, Dell F. Dullum, Jack F. Ehle, Golda Fischer, Wm. F. Knowles, John W. Thomas, Hans J. Zwang, Alameda-Contra Costa Counties; Philip Winsor, Louis E. Blachman, Louis Hertz, Donald L. Martinson, H. A. Thomason, Joseph T. Crockett, Eugene A. Hickman, Vahe Meghrouni, Gail Victor Anderson, Shannon D. Brunjes, Keith H. Kelly, Johanna Eliz. Lund, Dean LaRoche Moyer, Jesse L. Steinfeld, Kouichi R. Tanaka, Raymond H. Ten Pas, Ruth Perkins Walter, Robert H. Yonemoto, Los Angeles County; Edward E. Eklund, Napa County; Thomas W. Kyddson, Sacramento County; and Sidney B. Clark, San Diego County.

(d) On motion duly made and seconded in each instance, 12 members were voted Retired Membership. These were: Frederic W. Burcky, Herman W. Covey, Edwin H. Hall, Earl K. Pfaff, Leroy B. Sherry, Los Angeles County; Leo L. Stanley, Marin County; W. F. Kistinger, Orange County; R. R. Newell, Wm. Francis Shaw, San Francisco County; Clifford F. Jones, Santa Barbara County; Robert Allen Powers, Santa Clara County; and Catherine M. Quinlan, Sonoma County.

(e) On motion duly made and seconded in each instance, 22 members were voted a reduction of dues because of illness or postgraduate study.

3. *Financial:*

(a) A report of bank balances, loans, etc., as of February 17, 1959, was presented and ordered filed.

(b) A proposed budget for the 1959-1960 fiscal year was presented by the Finance Committee and, after discussion and on motion duly made and seconded, was approved for presentation to the House of Delegates.

4. *By-Law Amendments:*

Discussion was held on several proposed By-Law amendments, all intended to adjust technical requirements and to establish a new organization of commission and committee activities.

On motion duly made and seconded, in each instance, the following proposed By-Law amendments were approved for presentation to the House of Delegates:

(a) Chapter VII, Section 3, paragraphs (c) and (d), relating to appointments to Commissions and Committees.

(b) Chapter VII, Section 5, paragraph (b), relating to appointments to commissions and committees.

(c) Chapter VII, Section 9, paragraphs (b), (c), (d), and (e), relating to a realignment of commissions.

5. *Supplemental Report of the Council:*

Dr. Reynolds presented the report of his special committee to consider methods of providing medical care for aged citizens. This report, after discussion and amendment, and on motion duly made and seconded, was approved as a supplemental report of the Council for presentation to the House of Delegates.

6. *California Physicians' Service:*

Dr. Arlo A. Morrison, chairman of California Physicians' Service, reported that C.P.S. had developed, at the request of Dr. Reynolds' committee (item 5) a program for the provision of physicians' services to the older age group, based upon fees at a $5 factor, on which 60 per cent would be paid to physicians, and embracing co-insurance on the basis of the member paying a nominal sum for each visit. C.P.S., he stated, would plan to offer this coverage in two areas for a trial period, would agree to subsidize the program up to losses of $100,000 (if incurred) and would request the Association to furnish further subsidy if needed. Dr. Morrison also suggested that the Association cooperate with the American Association of Retired Persons, an organization which is currently arranging medical care coverage for 300,000 persons.

On motion duly made and seconded, it was voted to commend Dr. Morrison and California Physicians' Service for the report and the cooperation offered.

7. *Council, Commission, Committee Procedures:*

Mr. Hassard presented a set of standing rules proposed for the conduct of Council, commission and committee procedures. After discussion, on

motion duly made and seconded, these procedures were adopted, subject to an addition of a section which would organize the delegation to the A.M.A. on a similar basis.

8. *Association of American Physicians and Surgeons:*

(a) Discussion was held on the request of a county health officer for an expression of opinion on the fluoridation of water. On motion duly made and seconded, it was voted to reaffirm the previous decision of Council in favor of the fluoridation of communal water supplies.

(b) On motion duly made and seconded, it was voted not to sponsor an essay contest developed by the Association of American Physicians and Surgeons.

(c) On motion duly made and seconded, it was voted not to provide exhibit space for the Association of American Physicians and Surgeons.

9. *Free Choice of Physician:*

Discussion was held on questions which the American Medical Association had posed to state societies on their attitudes toward possible inflexibility in upholding the principle of free choice of physician. On motion duly made and seconded, it was voted to utilize for this purpose two of a set of guides developed by the Commission on Medical Services which includes the following language:

"The patient's right freely to select or change his physician should be preserved in the patient's interest and any interferences or restriction on the patient that is adverse to his welfare should be opposed.

"Physicians must have the right to select their method of practice, without coercion, provided they respect legal and ethical rules."

10. *Tetanus Immunization:*

Editor Wilbur discussed an article on tetanus immunization which had been submitted for publication in California Medicine and proposed as a part of a public campaign to secure additional immunizations; he also discussed the possibility of treating the subject editorially rather than as a scientific article. On motion duly made and seconded, it was voted to prepare an editorial on tetanus immunization.

11. *Los Angeles Physicians Aid:*

Dr. Clarence H. Albaugh, representing Los Angeles Physicians Aid, reported that that organization was planning construction of a nursing home for the care of aged physicians. Additional financing in the amount of $100,000 would be required and he requested that Physicians' Benevolence Fund, Inc., consider making a loan in that amount. Inasmuch as this is a separate corporation, which had a meeting planned on February 25, Dr. Albaugh agreed to present the request at that meeting.

12. *Delegates to the A.M.A.:*

Dr. Eugene Hoffman requested the Council to bring before the House of Delegates a resolution of appreciation for the many past services rendered by Dr. E. Vincent Askey of Los Angeles. On motion duly made and seconded, it was unanimously voted to prepare such a resolution, to place it before the House of Delegates and to prepare a scroll to be presented to Dr. Askey at the time of the next A.M.A. meeting.

13. *Commission and Committee Nominations:*

Councilor Bostick, chairman of the committee on nominations, presented the committee's list, which on motion duly made and seconded, was voted approval for presentation to the House of Delegates.

14. *Committee on Legislation:*

Dr. Dan O. Kilroy, chairman of the Committee on Legislation, reported that federal officials have proposed that the needy disabled be added to the categories of those now benefiting under the social welfare health care program. No action taken.

15. California Medicine:

Editor Wilbur reported that the editorial board had proposed several changes in the content of the journal, including additional scientific editorials, clinical pathological conferences and other items. He discussed the difficulties involved in securing some of this material. He also suggested that a series of articles on the functioning of the Association be prepared and that commission and committee reports, after approval by the Council, be printed. Dr. Wilbur also suggested that a representative of each medical school be added to the editorial board as a source for additional scientific material and asked that consideration be given to the possibility of converting California Medicine into a regional, rather than a state, journal.

16. *Commission on Medical Services:*

(a) Dr. Francis J. Cox, chairman of the Commission on Medical Services, presented a set of principles for the guidance of the Association in its dealings with various aspects of prepaid health insurance. On motion duly made and seconded, the principles (see page 290 of this issue, California Medicine) were approved:

(b) On motion duly made and seconded, approval was voted for the report of the Committee on Indigent and Aged.

(c) On motion duly made and seconded approval was voted for the report of the Committee on Rehabilitation.

17. *Cancer Commission:*

Dr. Davis presented a resolution adopted by the Cancer Commission on exfoliative cytology and requested Council approval. On motion duly made and seconded, the resolution was amended. The chairman was requested to submit it, as amended, as an emergency item in the House of Delegates.

18. *Committee on Insurance:*

(a) Dr. Homer Pheasant, chairman of the Committee on Insurance, reported that the 1958 experience under the Association's disability insurance program had shown a loss ratio of 61 per cent and that an increase in benefits might be sought in the future. It was regularly moved, seconded and voted to approve this plan.

(b) Dr. Pheasant also reported that a definite offering of a group major hospitalization insurance plan was about ready for compiling and presentation to county secretaries, after which the program will be presented to the Council.

19. *Legal Department:*

Mr. Hassard reported that the Association's share of reimbursement for the cost of maintaining scientific administration of the office of coroner had amounted to $1,625. On motion duly made and seconded, it was voted to pay this sum.

Mr. Hassard also reported that an insurance broker had requested the use of the C.M.A. mailing list for an offering of insurance to provide reimbursement for days spent in court in lawsuits. On motion duly made and seconded, it was voted that the regular policy of denying the use of the mailing list for commercial purposes be followed.

20. *Interprofessional Institute:*

A report by Dr. Batchelder on his meeting with allied professional representatives under the sponsorship of the State Department of Public Health, was reviewed. It was proposed that an interprofessional institute be established for the purpose of exploring the relationship between human and animal medicine, especially in disease entities which might be transmittable from animals to humans. On motion duly made and seconded, it was voted to participate in this proposal and to authorize Dr. Batchelder to represent the Association at meetings.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 9:00 a.m., Wednesday, February 25, 1959.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

446th Meeting

Tentative Draft: Minutes of the 446th Meeting of the Council, San Francisco, Sheraton-Palace Hotel, February 25, 1959.

The meeting was called to order by Chairman Lum in the California Room of the Sheraton-Palace Hotel, San Francisco, on Wednesday, February 25, 1959, at 5:15 p.m.

Roll Call:

Present were President Reynolds, President-Elect Foster, Speaker Doyle, Vice-Speaker Heron, Editor Wilbur and Councilors MacLaggan, Wheeler, Todd, Quinn, O'Neill, Kirchner, O'Connor, Shaw, Gifford, Harrington, Davis, Sherman, Campbell, Lum, Bostick and Teall. Absent for cause, Secretary Daniels.

A quorum present and acting.

Present by invitation were Messrs. Hunton, Thomas and Clancy and C.M.A. staff; Messrs. Hassard and Huber of legal counsel, and Doctors Elizabeth Mason-Hohl and Clarence H. Albaugh.

Welcome to New Members:

Chairman Lum extended a welcome to Dr. Paul D. Foster, newly-elected President-Elect, and Doctors William F. Quinn of Los Angeles, Byron L. Gifford of Santa Barbara and Donald M. Campbell of San Francisco, new Councilors.

1. *Election of Council Officers:*

(a) On nomination duly made and seconded, Dr. Donald D. Lum was elected Chairman.

(b) On nomination duly made and seconded, Dr. Samuel R. Sherman was elected Vice-Chairman.

2. *Appointments:*

(a) On nominations duly made and seconded in each instance, the following were appointed to the positions shown opposite their names:

Editor Dwight L. Wilbur
Executive Secretary . . . Mr. John Hunton
Legal Counsel . . Peart, Baraty & Hassard

(b) The chairman, the council concurring, announced the following appointments:

1. Finance Committee: Ivan C. Heron, chairman; Samuel R. Sherman; Burt L. Davis.

2. C.P.S. Board of Trustees: Ivan C. Heron, Burt L. Davis and Gerald W. Shaw.

3. Advertising Committee: Robertson Ward, chairman; Eugene Hopp, Allen T. Hinman, W. Dayton Clark, Ralph Weilerstein.

3. *Kern County Nursing Home:*

Discussion was held on the proposal of the Board of Supervisors of Kern County to construct and operate a nursing home in the county. On motion duly made and seconded, it was voted to refer this

matter to the ad hoc Committee on the Aging, under the chairmanship of Dr. Reynolds.

4. *Standing Rules for Council, Commissions, Committees:*

On motion, the standing rules were amended to include the Delegates to the American Medical Association on the same basis as commissions and committees.

It was also agreed that a set of guides should be prepared for members of the C.M.A. House of Delegates.

5. *Time and Place of Next Meeting:*

The chair announced, the Council concurring, that the next meeting would be held in Los Angeles on Saturday, March 14, 1959.

6. *Time and Place of 1960 Annual Session:*

It was agreed that the 1960 Annual Session be held at the Ambassador Hotel, Los Angeles, on March 13 to 16, 1960.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 6:00 p.m.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

In Memoriam

DOWNS, LAWRENCE E. Died February 18, 1959, aged 75, of heart disease. Graduate of University of Louisville School of Medicine, Kentucky, 1912. Licensed in California in 1921. Doctor Downs was a member of the Los Angeles County Medical Association.

✣

ELLIOT, ROBERT EDWIN. Died January 17, 1959, aged 51. Graduate of Stritch School of Medicine of Loyola University, Chicago, Illinois, 1932. Licensed in California in 1948. Doctor Elliot was a member of the Los Angeles County Medical Association.

✣

FAIRCHILD, FRED R. Died February 22, 1959, aged 83. Graduate of Cooper Medical College, San Francisco, 1902. Licensed in California in 1902. Doctor Fairchild was a life member of the Yolo County Medical Society.

✣

FLUDE, JOHN M. Died February 9, 1959, aged 65. Graduate of Jefferson Medical College of Philadelphia, Pennsylvania, 1918. Licensed in California in 1938. Doctor Flude was a member of the Los Angeles County Medical Association.

✣

FRANKLIN, EARL ALEXANDER. Died February 14, 1959, aged 63. Graduate of Jefferson Medical College of Philadelphia, Pennsylvania, in 1922. Licensed in California in 1942. Doctor Franklin was a member of the San Francisco Medical Society.

LA MONT, WYANT. Died February 7, 1959, aged 59. Graduate of Rush Medical College, Chicago, Illinois, 1925. Licensed in California in 1926. Doctor La Mont was a member of the Los Angeles County Medical Association.

✣

LEYDA, PAUL L. JR. Died in Denver, Colorado, February 24, 1959, aged 35. Graduate of University of Colorado School of Medicine, Denver, 1946. Licensed in California in 1953. Doctor Leyda was a member of the Alameda-Contra Costa Medical Association.

✣

MEAD, CHESTER IRA. Died in Bakersfield, February 11, 1959, aged 58. Graduate of State University of Iowa College of Medicine, Iowa City, Iowa, 1931. Licensed in California in 1934. Doctor Mead was a member of the Kern County Medical Society.

✣

REEDER, THOMAS PICKINS, JR. Died February 26, 1959, aged 47. Graduate of University of Texas Medical Branch, Galveston, Texas, 1936. Licensed in California in 1939. Doctor Reeder was a member of the Orange County Medical Association.

✣

SCHEFFEL, ALFRED GARLAND. Died in Santa Monica, February 13, 1959, aged 45, of heart disease. Graduate of Northwestern University Medical School, Chicago, Illinois, 1937. Licensed in California in 1937. Doctor Scheffel was a member of the Los Angeles County Medical Association.

NINTH ANNUAL
REGIONAL POSTGRADUATE INSTITUTE
WEST COAST COUNTIES

Presented by Committee on Postgraduate Activities of the California Medical Association, in cooperation with Monterey, Santa Cruz and San Benito County Medical Societies and Stanford University School of Medicine, Lowell A. Rantz, M.D., Associate Dean and Director of Postgraduate Medical Education.

Golden Bough Theater and
La Playa Hotel, Carmel... May 14 and 15

PROGRAM

THURSDAY, MAY 14, 1959

9:00-10:00 a.m.—**Useful Measures in Postoperative Care**—Victor Richards, M.D.

10:15-12:00 noon—**Two Panel Discussions** (you may go to one of your choice):

Panel 1: **Management of Highway Injuries**

Panel 2: **Medical Diseases of the Kidney**

Concurrent Lectures

10:15-11:00 a.m.—**Use of Radioisotopes in Diagnosis and Treatment**—Joseph P. Kriss, M.D.

11:10-12:00 noon—**Management of Some Common Endocrine Problems**—Francis S. Greenspan, M.D.

2:00-3:00 p.m.—**Hospital Acquired Infection**—Lowell A. Rantz, M.D.

3:15-5:00 p.m.—**Three Panel Discussions** (you may go to one of your choice):

Panel 1: **Hemotological Problems in the First Year of Life**

Panel 2: **Diagnosis and Treatment of Jaundice**

Panel 3: **Endocrine Disorders**

Concurrent Lectures

3:15-4:00 p.m.—**Problems in the Repair of Inguinal Hernia**—Roy B. Cohn, M.D.

4:10-5:00 p.m.—**Enzymes in Diagnosis and Treatment**—Laurens P. White, M.D.

6:30 p.m.—"No Host" Cocktail Party and Dinner-Dance

FRIDAY, MAY 15, 1959

9:00-10:00 a.m.—**Poisoning in Childhood**—Robert H. Alway, M.D.

10:15-12:00 noon—**Two Panel Discussions** (you may go to one of your choice):

Panel 1: **Interpretation of Laboratory Results**

Panel 2: **Treatment of Burns**

Concurrent Lectures

10:15-11:00 a.m.—**Clinical Course of Cirrhosis of the Liver**—Claude P. Callaway, M.D.

11:10-12:00 noon—**Care of the Premature Infant**—Ruth T. Gross, M.D.

2:00-3:00 p.m.—**The Role of the Artificial Kidney in Treatment**—J. Max Rukes, M.D.

3:15-5:00 p.m.—**Three Panel Discussions** (you may go to one of your choice):

Panel 1: **Problems in Hematology**

Panel 2: **Hemoptysis, Hematemesis and Melena**

Panel 3: **Diagnosis and Treatment of Common Infections**

Concurrent Lectures

3:15-4:00 p.m.—**Diagnosis and Treatment of Jaundice in the Newborn**—Ruth T. Gross, M.D.

4:10-5:00 p.m.—**Useful Measures in the Treatment of Late Cancer**—Victor Richards, M.D.

HOST: Monterey County Medical Society . . . **REGIONAL CHAIRMAN:** Chester G. Moore, M.D., 440 E. Romie Lane, Salinas, California . . . **INSTITUTE FEE:** $25.00. For additional information, contact Postgraduate Activities office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5. **All California Medical Association members and their families are cordially invited to attend.**

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

SIXTEEN LOCAL health departments currently are engaged in 26 demonstration and research projects supported by State grants totaling $222,000 and covering the fields of maternal and child health, occupational health, aging and chronic disease.

The local projects encompass a broad range of public health interest, such as the demonstration of a home nursing program in a rural area, the study of gonadal exposure from medical radiation, a demonstration of patient restorative services in a nursing home, a rehabilitation nursing program for the disabled and elderly at Fairmont Hospital, evaluation of a hearing conservation program and the distribution and characteristics of staphylococcal infections in a general hospital.

Purpose of the program is to focus attention on the changing needs in the fields of occupational health, aging and chronic disease and maternal and child health; to advance public health knowledge and practice, and to encourage research in these fields within local health departments.

In operation, a local health agency submits a project application to this department. Twice a year an advisory committee meets to review applications. The committee is composed of local health officers and representatives from schools of public health, schools of medicine, voluntary health agencies and private physicians.

The advisory group gives priority rating to approved applications and submits recommendations to the director for action. Applications are considered on the basis of clarity and worthiness of objectives, adequacy of proposed research or demonstration methods, soundness of the plan for evaluation and practicality of budget, staff and facilities.

Participating in the program are the county health departments of Yolo, Butte, Los Angeles, Shasta, San Bernardino, Contra Costa, Marin, San Joaquin, Santa Cruz, San Francisco, Alameda, San Mateo, Santa Clara and Modoc counties. Participating city health departments are those of Los Angeles and Long Beach.

* * *

Meeting in San Francisco February 26 and 27, the California Conference of Local Health Officers endorsed the California Medical Association's three-point program for assuring the protection of the inadequately vaccinated against paralytic poliomyelitis.

The endorsement followed a February 24 joint meeting of the conference members with C.M.A. staff and representatives of local medical societies to consider plans for community poliomyelitis vaccination programs.

The meeting, arranged by the C.M.A. and this department, emphasized the concern of private medicine and public health with the failure of thousands of susceptible Californians to seek protection against paralytic poliomyelitis.

The conference also gave support to the C.M.A. resolution for the development of cytology screening programs for cervical cancer case finding and endorsed the Association's suggestions for stimulating immunization against tetanus. It was recommended that local health officers cooperate to the fullest in assuring success of these programs.

* * *

The State Board of Public Health in February quarantined a four-mile stretch of beach on Monterey Bay in the vicinity of the Watsonville sewer system outfall because of sewage in the water and on the beach.

The quarantine area extends from the southern boundary of Sunset Beach State Park in Santa Cruz County to the southern boundary of Zmudowski Beach Park in Monterey County. The public will be barred from the area, one of the best clamming spots in California, during the quarantine period.

Watsonville city officials informed the board that plans have been drafted for a new sewage treatment plant and that it should be completed and in operation about July 1 of next year.

* * *

Available from the U. S. Public Health Service is a pamphlet describing the activities of the Clinical Center of the National Institutes of Health at Bethesda, Maryland.

The center is accepting a limited number of patients each month for study and therapy. Patients are admitted only on referral by a physician. The brochure, entitled "Current Clinical Studies and Patient Referral Procedures," describes briefly the studies to which patients are currently being admitted.

WOMAN'S AUXILIAR
TO THE CALIFORNIA MEDICAL ASSOCIATIO

With this issue of California Medicine your State Auxiliary begins a new year. Just five years ago through the efforts of Mrs. Frederick J. Miller of Bakersfield, our state president at that time, this page in California Medicine was secured for the Woman's Auxiliary.

During these five years our membership has increased by 1,200. Three county auxiliaries have been added, Merced, Tulare and Tehama. It would be our pleasure to add to that number during this year.

While our membership has increased, our projects, like our objectives, have remained the same. The American Medical Education Foundation program ranks high on the list for county participation, with all but three of the counties having contributed to this date. Money for A.M.E.F. is raised by assessment of members and benefit parties within the counties. Figures on total contributions will be available at the close of the fiscal year.

Also outstanding is our Nurse Recruitment and Scholarship program. In some counties a few physicians have objected to the county auxiliary participating in the Nurse Recruitment and Scholarship program because the nurses that receive the scholarships often do not return to their home counties after graduation. This may be true but with almost all county auxiliaries participating in the scholarship program there will be a migration of nurses from one part of the state to another to equalize the distribution of trained nurses having received help from the Auxiliary.

According to the latest figures, in the thirty-four organized county auxiliaries 25 counties give nursing scholarships, varying in amounts from $100 to $500 per student for a three-year period. Five of these same counties also have loan funds for student nurses, three counties have loan funds only and one county has a loan fund for nurses and also gives scholarships to medical students. Five counties do not participate in either the loan or scholarship program. (Some in the latter category have too small a membership to carry the burden of such a program.) Twenty-six of the organized counties sponsor Future Nurse Clubs.

This indicates the willingness of all the members to participate in the Auxiliary program and thus further one of our prime objectives, "To assist the California Medical Association in its program for the advancement of medicine and public health." This year we also plan to place emphasis on another objective, incorporated in our Constitution, which reads: "To cultivate friendly relations and promote mutual understanding among physicians' families." As a reminder of this objective our theme for the year is, *Focus on Friendly Relations.*

To keep in closer touch with the county auxiliaries, encourage their suggestions and answer any questions, a newsletter, "Auxilirama" will be sent out periodically throughout the year to State Board members, county presidents, county presidents-elect and members-at-large. At this time we have ten members-at-large. They are wives of physicians residing in a county where there is no component auxiliary. Women in this category may apply to the State Auxiliary for membership or they may apply for membership in a nearby county having an auxiliary.

There are still many physicians' wives who are not members of our Auxiliary. In fact, the membership in the Auxiliary is less than half the membership in the California Medical Association. If your wife is not a member, will you please encourage her to join us—to help us assist organized medicine in its effort to bring about a better way of life for all.

Mrs. Theodore A. Poska
President, Woman's Auxiliary to the California Medical Association

NEWS & NOTES

NATIONAL • STATE • COUNTY

BUTTE

Dr. Arnold W. Brockmole has been **appointed health officer** of Butte County, replacing Dr. Ronald Hewitt, who was serving pro tem. Dr. Brockmole was formerly assistant county health officer, epidemiologist and director of communicable disease control at Evansville, Indiana.

LOS ANGELES

Two grants totalling $117,300 for two research projects being carried on at **St. Joseph Hospital,** Burbank, were awarded recently by the National Institutes of Health of the Department of Health, Education, and Welfare. The hospital will receive $77,300 for a study directed by Dr. Peter F. Salisbury on mechanisms that influence the circulation of blood. The other grant, of $40,000, was made to support work by Dr. I. Alfred Breckler on the development of an oxygenator of a new kind that uses ultrasonic principles to promote the interchange of gasses in the blood.

* * *

The 30th annual meeting of the **Aero Medical Association** will be held April 27 to 29 at the Statler-Hilton Hotel, Los Angeles. To be held in conjunction with this meeting are meetings of the Airlines Medical Directors Association and the Civil Aviation Medical Association.

Announcement of the meeting said that there are to be 150 scientific papers covering the entire field of aviation and space medicine.

* * *

Dr. G. E. Norward has been appointed assistant dean of the College of Medical Evangelists. He had been a member of the faculty for several years as assistant clinical professor of obstetrics and gynecology.

* * *

The Los Angeles Doctors' Symphony Orchestra named the following new officers at its recent annual elections: Lester M. Morrison, M.D., president; Jesse Younger, M.D., vice-president; William Curry, D.D.S., secretary; Jack Brody, M.D., treasurer; Mrs. Jack Brody, librarian.

The Los Angeles Doctors' Symphony Orchestra, a five-year-old, nonprofit organization sponsored by the Los Angeles County Medical Association, holds weekly rehearsals and gives two symphonic concerts yearly for charitable purposes.

RIVERSIDE

Two associate professors of chemistry at University of Redlands are joint recipients of a **research grant** of $5,500 announced recently by the Riverside County Heart Association. The grant is to support studies they are carrying out on the nature of the protein molecule.

MERCED

Dr. Gerald D. Wood of Merced has been installed as president of the Merced County Medical Society and Dr. Bruce E. McDowell was elected president-elect. Other officers elected are Dr. Zdenek Fluss, secretary-treasurer, and Dr. Addison Udall, vice-president.

SAN FRANCISCO

The annual concert of the San Francisco Medical Society Symphony Orchestra to be played April 19 at 2 p.m. in the Masonic Memorial Temple will be dedicated to the **memory of Dr. Frederic C. Bost,** who died in February of this year.

* * *

Under a $255,000 grant from the Russell Sage Foundation, **Stanford Medical School** will establish a **new teaching and research** program that combines social sciences with medicine.

Students and faculty of the medical school and of the departments of sociology, psychology, and anthropology will collaborate. The program will begin next fall when the medical school moves into its new $20 million center on the campus.

The Russell Sage grant will provide basic support for the first five years. It will finance a beginning staff, student fellowships, and some research. Nurses, social workers, and other members of the health team are expected to join the program eventually.

Long-range plans were developed from studies supported by an earlier grant from the foundation. The planners included Associate Dean Lyman M. Stowe of the medical school, and Professors Rodney R. Beard of preventive medicine, Thomas A. Gonda of psychiatry, and Edmund H. Volkart of sociology. Professor Volkart will direct the program during its first year.

SOLANO

Dr. Robert W. Hoellwarth, Vallejo, was installed as president of the Solano County Medical Society at a recent meeting of the organization, and Dr. Elwin W. Midgely, formerly secretary-treasurer, was named president-elect. Dr. Hoellwarth succeeded Dr. George M. Budd, who was elected a director. Dr. Douglas J. Woodward was elected secretary-treasurer.

VENTURA

The Ventura County Heart Association recently announced award of three grants totalling $16,950 in aid of research in three California institutions. The grants, all for research into the relation of blood lipids to arterial disease, were:

To Dr. Laurance Kinsell, Institute of Metabolic Research, Highland Alameda County Hospital, $10,000.

To Dr. Jessie Marmorston, University of Southern California School of Medicine, $5,000.

To Dr. Lyon Chaikoff, department of physiology, University of California School of Medicine, San Francisco, $1,950.

GENERAL

A California Medical Eye Council was organized during the recent California Medical Association meeting in San Francisco by a statewide group of ophthalmologists to implement the educational activities of the National Medical Foundation for Eye Care on the state level. A prime purpose of the organization is to inform the public of the importance of a medical examination of the eye for the purpose of **recognizing glaucoma** in its early stages when it may still respond to conservative treatment.

* * *

The Western Section of the **American Urological Association** will hold its 35th annual convention at the Fairgrounds at Monterey, May 17 through 21, 1959. Further information may be obtained from Dr. James Ownby, Jr., 516 Sutter Street, San Francisco.

POSTGRADUATE

EDUCATION NOTICES

THIS BULLETIN of the dotes of postgraduote educotion progroms ond the meetings of various medicol orgonizotions in Colifornio is supplied by the Committee on Postgroduate Activities of the Colifornio Medicol Associotion. In order thot they moy be listed here, pleose send communicotions reloting to your future medicol or surgicol programs to: Mrs. Morgoret H. Griffith, Director, Postgroduote Activities, Colifornio Medical Associotion, 2975 Wilshire Boulevord, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Current Developments in Nutrition (Arrowhead). Friday, Saturday and Sunday. April 24, 25 and 26. Ten hours. Fee: $50.00 (includes board and room).

Fetal Electrocardiography. Friday and Saturday, June 5 and 6. Twelve hours. Fee: $40.00.

Workshop for Food Service Workers—Equipment Maintenance. Monday and Tuesday, June 15 and 16. Twelve hours. Fee: $20.00 (includes two lunches).

Techniques of Hypnosis. Monday, Tuesday and Wednesday morning, June 15, 16 and 17. Fifteen hours. Fee: $65.00.†

Advanced Techniques and Application of Hypnosis. Wednesday afternoon and Thursday and Friday, June 17, 18 and 19. Fifteen hours. Fee: $110.00.†

Office Urology. Wednesday, June 17. Six hours. Fee: $25.00.

Surgical Technique Utilizing the Isolated Intestinal Segment in Urological Procedures. Thursday, June 18. Seven hours. Fee: $150.00.†

Eighth Annual Symposium in Clinical Laboratory Technology. Saturday and Sunday, June 20 and 21. Twelve hours. Fee: $20.00 (includes one lunch).

Dissection of the Thorax, Abdomen and Pelvis. Tuesday and Wednesday, June 23 and 24. Twelve hours.*†

Dissection of the Extremities. Thursday and Friday, June 25 and 26. Twelve hours.*†

Hand Surgery. Saturday and Sunday, June 27 and 28. Twelve hours.*

Infertility. Friday and Saturday, July 24 and 25. Twelve hours.*

The Impact of Surgery on Anesthesia. Wednesday, Thursday and Friday, August 5, 6 and 7. Eighteen hours. Fee: $50.00.

Three Summer Seminars at University of California Residential Conference Center, Lake Arrowhead (all fees at Lake Arrowhead include room and board):

Pediatric Cardiology. Sunday through Wednesday, August 16 through 19. Fifteen hours. Fee: $137.50.† Guest speaker: John Lind, M.D., Stockholm, Sweden.

Emotional Problems in Office Practice. Wednesday through Sunday, August 19 through 23. Fifteen hours. Fee: $150.00.†

Seminars in Internal Medicine. Sunday through Wednesday, August 23 through 26. Fifteen hours. Fee: $137.50.†

Clinical Traineeships—Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Nursing in Rehabilitation. Monday to Friday, April 27 through May 15. One hundred and five hours. No fee.

Ear-Nose-Throat. Friday and Saturday, May 15 and 16. Fourteen hours. Fee: $40.00.

Orthopedics (Mt. Zion Hospital). Friday and Saturday, May 15 and 16. Fourteen hours. Fee: $40.00.

Practical Aspects in the Management and Treatment of Cardiovascular Disease. Saturday, Sunday and Monday, May 16, 17 and 18. Twenty-one hours.*

Pediatrics. Wednesday through Saturday, June 17 through 20. Twenty-eight hours.*

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Assistant Dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Operable Heart Disease. Thursday, Friday and Saturday, April 30, May 1 and 2. Fee: $40.00.

Contact: Mrs. Alice Crouch, Postgraduate Secretary, Stanford Medical School, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by

* Fees to be announced.
† Limited enrollment.

mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14. (As a time and money saver, round trip air travel is also possible July 29 to August 10.)

Intensive Review of Internal Medicine. Monday through Friday, September 21 through October 2. 9 to 12:30 a.m.*

Alumni Homecoming Course. Recent Advances in Medicine. Thursday and Friday, November 5 and 6. Fee: $50.00.

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

GENERAL SURGERY AND SURGICAL SPECIALTIES. Full-Time Basic Science Course. Accredited by the American Board of Surgery.

Surgical Anatomy—Head and Neck (14 periods, 63 hours), April 22 through June 3. Tuition: $75.00.

Surgical Anatomy—Head and Neck (12 periods, 24 hours), April 22 through June 3. Tuition: $35.00.

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: G. E. Norwood, M.D., assistant dean and chairman, Division of Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33. ANgelus 9-7241, Ext. 214.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE INSTITUTES

Southern Counties in cooperation with University of California, San Francisco, April 23 and 24, Disneyland. Dynamic Concepts in Medicine—A Two-Day Symposium on the Psychological Factors in Medical Practice. Chairman: E. F. Cain, M.D., 200 N. Palm, Anaheim.

West Coast Counties in cooperation with Stanford University School of Medicine, May 14 and 15, La Playa Hotel and Golden Bough Theater, Carmel. Chairman: Chester G. Moore, M.D., 440 E. Romie Lane, Salinas.

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25 and 26, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

Audio Digest Foundation, a nonprofit subsidiary of the C.M.A., now offers (on a subscription basis) a series of hour-long tape recordings designed to keep the physician abreast of current happenings in his particular field. Composed of practice-useful abstracts from 600 leading journals, with short lectures and editorial comments from prominent physicians, Audio Digest offers programs covering general practice, surgery, internal medicine, obstetrics and gynecology, and pediatrics.

Audio-Digest plans to begin a new series of programs covering the specialty of Anesthesiology. The first of these will be issued early this year. Those wishing to be charter subscribers to this tape-recorded review of what is new and important in the field of Anesthesiology should write to Mr. Claron L. Oakley, Editor, 1919 Wilshire Boulevard, Los Angeles 57, HUbbard 3-3451, for order form and further information.

Contact: Claron L. Oakley, editor, 1919 Wilshire Blvd., Los Angeles 57.

Medical Dates Bulletin

APRIL MEETINGS

Palo Alto Medical Clinic Second Annual Medical Symposia: Cardiology and Immunology, April 18, 8:30 a.m., Clinic Auditorium. *Contact:* John F. Weigen, M.D., program chairman, Palo Alto Medical Clinic, Palo Alto, Calif.

Bakersfield Surgical Society Meeting, April 18, 8:30 p.m. *Contact:* Chas. P. Marvin, M.D., 2628 G Street, Bakersfield.

American Society of Internal Medicine 3rd Annual Meeting. April 19, Conrad Hilton Hotel, Chicago. *Contact:* Clyde C. Greene, Jr., M.D., assistant secretary-treasurer, 350 Post Street, San Francisco 8.

American Association for Thoracic Surgery. April 21 through 23, Statler Hotel, Los Angeles. *Contact:* Hiram T. Langston, M.D., secretary, 7730 Carondelet Avenue, St. Louis 5, Missouri.

Sixth Annual Fort Miley Medical Clinics and Symposia, sponsored by San Francisco Academy of General Practice in cooperation with faculties of Stanford and U. C. Schools of Medicine. April 21 through May 26, Fort Miley Veterans Administration Hospital, 42nd Avenue and Clement Street, San Francisco. 8 p.m. each Tuesday, ending May 26, 1959. Registration fee: Members $15.00; nonmembers $20.00 *Contact:* Robert W. Wolf, M.D., chairman, 760 Market Street, San Francisco 2.

Hawaii Medical Association Annual Meeting, April 23 through 25, Hilo. *Contact:* Miss Lee McCaslin, executive secretary, 510 S. Beretania Street, Honolulu 13.

California Medical Association Rural Health Conference. April 24 and 25, Hacienda Hotel, Fresno. *Contact:* Robert Marvin, C.M.A., 450 Sutter Street, San Francisco 8.

Aero Medical Association. April 27 through 29, Hotel Statler, Los Angeles. *Contact:* Thomas H. Sutherland, M.D., secretary, P. O. Box 26. Marion, Ohio.

MAY MEETINGS

Pacific Coast Society of Ophthalmology and Otolaryngology Meeting. May 3 through 8, Riviera Hotel, Las Vegas, Nevada. *Contact:* Walter P. Work, M.D., secretary, 384 Post Street, San Francisco.

Los Angeles County Heart Association Annual Membership Meeting, May 6, 12 noon, Statler Hotel. *Contact:* C. A. Alexander, executive director, 660 S. Western Avenue, Los Angeles 5.

The Nevada Academy of General Practice Annual Meeting, May 21 through 23, Riverside Hotel, Reno. Program by University of Southern California School of Medicine. *Contact:* Roy M. Peters, M.D., chairman, 475 S. Arlington Avenue, Reno, Nevada.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

SUMMER AND FALL MEETINGS

Western Branch, American Public Health Association Annual Meeting. June 2 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

Nevada State Medical Association, Annual Session, jointly with Reno Surgical Society, August 19 through 22, Mapes Hotel, Reno. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, executive secretary, 1309 Seventh Avenue, Seattle, Washington.

Oregon State Medical Society Annual Meeting, September 23 through 25, Medford, Oregon. *Contact:* Mr. Roscoe K. Miller, executive secretary, 1115 S.W. Taylor St., Portland 5, Oregon.

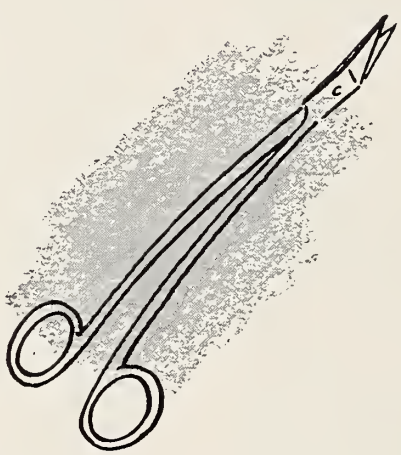
San Francisco Heart Association 29th Annual Postgraduate Symposium on Heart Disease. September 30, October 1 and 2, 9 a.m. to 5 p.m. daily, St. Francis Hotel, San Francisco. *Contact:* Lawrence I. Kramer, Jr., executive director, 259 Geary Street, San Francisco 2. YUkon 2-5753.

Western Industrial Medical Association, Inc. 18th Annual Meeting, held in conjunction with Third Western Industrial Health Conference, all day October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

California Society of Internal Medicine Annual Meeting, October 2 through 4, Miramar Hotel, Santa Barbara. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Clyde C. Greene, Jr., M.D., secretary-treasurer, 350 Post Street, San Francisco 8.

California League for Nursing Annual Meeting, October 8 through October 10, U. S. Grant Hotel, San Diego. *Contact:* Ruth I. Jorgensen, general director, Room 202, 465 Post St., San Francisco 2.

American Academy for Cerebral Palsy Annual Meeting, November 30 through December 2, Statler Hotel, Los Angeles. *Contact:* Margaret H. Jones, M.D., local arrangements chairman, associate professor of pediatrics, UCLA School of Medicine, Los Angeles 24.





THE PHYSICIAN'S *Bookshelf*

BONE TUMORS—Second Edition—Louis Lichtenstein, M.D., Chief Pathologist, VA Hospital, Los Angeles. The C. V. Mosby Company, St. Louis, 1959. 402 pages, 220 illustrations, $12.00.

This new edition of Lichtenstein's well known book appears in 24 chapters (adding two to the old list) and two appendices (adding one). The general format of the first edition has been adhered to. After two chapters dealing with general remarks and one with classification, there are chapters on osteochondroma, enchondroma, chondroblastoma, and the other benign and malignant lesions of bone.

Chapter 22 deals with "so-called adamantinoma of limb bones," 23 metastatic carcinoma, and 24 with tumors of periosteal origin. The appendices deal with nonneoplastic lesions of bone which may be mistaken for tumors, and tumors of synovial joints, bursae and tendon sheaths.

The author has replaced some of the illustrations (for example, figures 5 and 21 of the first edition) with improved ones; we still respectfully suggest that figure 3 should be replaced. Likewise, there is an improvement in the text of the legends: phrases such as "characteristic" have been replaced with "representative," which appears to this reviewer as a more sound roentgen description.

There is an important sentence in Chapter 1 dealing with the management of bone lesions that merits amplification and revision. The author writes: "If roentgen therapy is the treatment of choice for whatever reason, employ the smallest dose calculated to be effective. In general, a total tumor dose far exceeding 3,000 r should be avoided, if only because of the potential hazard of postirradiation sarcoma (after a latent interval usually of five years or more)." Radiologists recognize that the expression "3,000 r" is almost meaningless without specifying the *area* irradiated and the *time* during which the irradiation was given. In other words, 3,000 r to a 5 cm. diameter area in six months would have little effect. However, the same dose to the same area in one day would be hazardous. Furthermore, just as radical surgery for the cure of localized malignant disease carries some hazard, radical radiotherapy for the attempted cure of such lesions as monosteal Ewing's tumor or monosteal reticulum-cell sarcoma does carry some hazard. This is an acceptable hazard if a useful limb is preserved for twenty-five years. A tumor dose of more than 3,000 r may be necessary for the radical cure of some of these lesions.

There is an excellent section on the inherent limitations of roentgenographic interpretation (page 23) which should be followed by a comparable section on the inherent limitations of histopathologic interpretation. The reviewer believes that a busy clinical radiologist sees more bone tumors each year than any other physician. Therefore, he suggests that a wise first step in the differential diagnosis of bone tumors is consultation with two or three experienced clinical radiologists, and recording their respective opinions. Following such consultation, biopsy may be indicated, and may require review by two or three experienced pathologists for final identification of the tumor at hand.

The work is well illustrated and handsomely printed. It can be recommended to general surgeons, orthopedists and radiologists.

L. Henry Garland, M.B.

* * *

SEX AND THE ADOLESCENT—Maxine Davis; foreword by J. Roswell Gallagher, M.D. The Dial Press, 461 Fourth Avenue, New York 16, N. Y., 1958. 317 pages, $5.00.

The book tries to live up to its subtitle, "A Guide for Young People and Their Parents," and on the whole does a good job. It is written in simple, nontechnical language that can be easily understood by the average adolescent—and the average parent. The first part of the book is about boys, the second about girls, and the third about boys and girls together; a logical way of discussing the subject.

There are some excellent objective discussions in the chapters titled "Dating and Petting," "Going Steady," "The Great Debate: Intercourse Before Marriage," "Health Problems," "Drinking," and "Getting Along with Parents," which give arguments pro and con. The conclusions drawn undoubtedly will please almost all readers in that they strive to show the adolescent that the only really satisfactory sex practice is heterosexual relations between married partners. The book is quite frank and in general gives adequate and accurate information on the subjects discussed.

At times, however, the author backs down a little, obviously feeling that too much information may unduly stimulate curiosity. So, for example, Chapter 6, entitled "Homosexuality—What It Is and Is *Not*," gives no simple statement of what homosexuality is. Since there is much argument among psychiatrists and other physicians and scientists about latent and overt homosexuality and mixture of homo- and heterosexuality, some effort should have been made to clarify these points. In Chapter 21, on sexual abnormality, the definition of sexual perversion as "an emotional condition in which a person cannot find satisfaction in normal intercourse with a partner of the opposite sex," would probably satisfy most persons. However, many so-called perverts also enjoy "normal heterosexuality." The general discussion of homosexuality seems in line with the best thinking at the present time. The author states that some homosexual impulses commonly appear in everyone at times, particularly around the age of puberty. The adult homosexual she regards as a sick person who needs help and who will undoubtedly be unhappy in our American culture if he has such strong homosexual impulses that he ends up leading a homosexual existence. This is a sound attitude in that it neither glorifies homosexuality nor tends to stimulate further the adolescent's curiosity.

The reviewer recommends this book as one of the best to put in the hands of both the adolescent and the parent.

Karl M. Bowman, M.D.

PSYCHOSOMATIC OPHTHALMOLOGY—T. F. Schlaegel, Jr., M.D., Assistant Professor of Ophthalmology, Director of Research, Department of Ophthalmology, Indiana University School of Medicine, Indianapolis, Indiana, with the collaboration of Millard Hoyt, M.D., formerly Director of the Adult Psychiatry Outpatient Clinic and Instructor in Psychiatry, Indiana University School of Medicine. The Williams & Wilkins Company, Baltimore, 1957. 523 pages, $11.00.

The psychosomatic approach to ophthalmology is relatively new and has been neglected by many ophthalmologists, although most realize its importance.

Doctor Schlaegel, who is assistant professor of ophthalmology at Indiana University School of Medicine, has had training in psychiatry, which is apparent when one reads the book. He had defined psychosomatic ophthalmology as a method of approach in which somatic investigation is not neglected but in which psychologic and somatic factors are considered conjointly.

In this volume Doctor Schlaegel has assembled the widely scattered literature on the subject and has attempted to evaluate it. To this material he has added his own observations and case histories.

The book has been divided into five parts dealing with general considerations, with some general conditions which may involve the eye, ocular conditions according to anatomic location, ocular conditions without strict anatomic location and psychosomatic approach to treatment.

Whether or not one agrees with the ideas put forth, the book should be read, especially the first part which gives the modern approach to psychosomatic ophthalmology. The book is very readable and has a good deal of food for thought. The chapter of surgery seemed to be particularly rewarding.

While it may be considered controversial, the book should be in the library of every ophthalmologist and those who are interested in psychomatic medicine.

The paper, type and general format of the book are up to the usual high standard of Williams and Wilkins.

FREDERICK C. CORDES, M.D.

* * *

BREAST CANCER (The Second Biennial Louisiana Cancer Conference, New Orleans, January 22-23, 1958)—Edited by Albert Segaloff, M.D., Director of Endocrine Research, Alton Ochsner Medical Foundation; Associate Professor of Clinical Medicine, Tulane University School of Medicine. Sponsored by the American Cancer Society, Louisiana Division, Inc. The C. V. Mosby Company, St. Louis, 1958. 257 pages, $5.00.

Breast cancer remains ubiquitous and a therapeutic enigma. In an attempt to make matters less enigmatic, a special cancer conference was held at New Orleans in January 1958. This book summarizes the proceedings.

The first section deals with "Basic Biology," and consists of articles on epidemiology, biologic determinism, pathology, cytology, etiology and the care of terminally ill patients. In this section one of the brighter chapters deals with pathology and its endless variations. Figures 13 to 22 inclusive show photomicrographs of apparently ten different types of breast cancer. However, they were all taken from the same cancerous breast. Macdonald summarizes his evidence for believing that about 55 per cent of primary breast cancers are inherently unfavorable (remote spread occurs before the tumors are clinically detectable), about 20 per cent are favorable (slow growth), and in the remaining 25 per cent prognosis is related to promptness of adequate treatment. This is the one group in which educational propaganda may prove useful.

The second section deals with "Definitive Treatment"—ranging from simple to radical surgery and moderate to radical radiotherapy. By radical surgery is meant the removal of the internal mammary chain en bloc with the breast, the axillary contents, the suitable area of skin, etc. The advantages and limitations of the McWhirter program are outlined and the excellent results obtained by this careful worker described in some detail.

The third section deals with "Basic Biology" from the hormonal and metabolic viewpoint. Some possibilities of chemotherapy in advanced breast cancer are outlined.

The fourth section deals with "Hormonal Therapy," subtractive or additive. That roentgen castration is just as effective as surgical castration for the palliation of advanced mammary cancer is now well established. But habit is ingrained, and there is some persistent partiality for surgical. Gordon and Segaloff conclude on page 196 that x-ray or surgery *yield the same results, with similar hormone changes*, "if the x-ray therapy is given over a period of at least seven days." Like surgery, x-ray therapy must be competently accomplished. Adrenalectomy is discussed at some length, but hypophysectomy is accorded only brief space.

The monograph terminates with a summation by the editor, who must be congratulated on securing such prompt publication of so commendable a collection of essays. The work is recommended especially for internists, surgeons, generalists and radiologists.

L. HENRY GARLAND, M.B.

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EMERGENCY WAR SURGERY—U. S. Armed Forces issue of NATO Handbook, Prepared for Use by the Medical Services of NATO Nations. Prepared under the sponsorship of the Assistant Secretary of Defense (Health and Medical) Frank B. Berry, M.D. Printed by the United States Government Printing Office, Washington, D. C., 1958. Sold by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 411 pages, $2.25.

This book, Emergency War Surgery, is the U. S. Armed Forces issue of the NATO Handbook. It has been prepared for use by the Medical Services of NATO nations. The purpose of the book is to see that the information on emergency war surgery gained from the past major conflicts is reviewed, brought up-to-date and does not lie fallow between conflicts. It is hoped, of course, that knowledge of this type will not have to be used in the future, but inevitably physicians must be prepared for the special exigencies of war surgery.

Military surgery is designed to carry out specialized and essential medical care under adverse conditions of war. It is further characterized by the fact that the welfare of the individual must be sacrificed at times to the demands of the military effort and tactical situations of conflict. This brief but excellent book of 380 small pages of text, clearly written, nicely printed and beautifully presented, summarizes our present state of knowledge with respect to mass casualties, thermal burns, thermonuclear injuries, radiation injuries, response of the body to wounding, metabolic disturbances after trauma, infection, and general wound management in its opening chapters. It then proceeds to the discussion of sorting of casualties and care of patients at battalion aid stations prior to transportation back to definitive hospital care. The principles of emergency management are stressed throughout in injuries of the soft tissues, vascular injuries, bone and joint injuries, nerve injuries, abdominal and thoracic wounds. It is simply but profusely illustrated. It is an excellent handbook of emergency war surgery and one with which every physician should be thoroughly acquainted, be he general practitioner, internist, or surgeon.

The details of surgical management are not given but the principles of medical care are simply and admirably stated. The book is highly recommended for its special coverage of the problems in emergency war surgery.

VICTOR RICHARDS, M.D.

INTRACARDIAC PHENOMENA—In Right and Left Heart Catheterization, A Second Edition, Revised and Enlarged, of Cardiac Pressures and Pulses—Aldo A. Luisada, M.D., Director, Division of Cardiology and Associate Professor of Medicine, The Chicago Medical School, and Chi Kong Liu, M.D., Chief, Laboratory of Catheterization and Associate of Clinical Medicine, The Chicago Medical School. Grune and Stratton, New York, 1958. 179 pages, $9.50.

This is a revised and enlarged version of Cardiac Pressures and Pulses which appeared two years ago. The authors have added sections on left heart catheterization, intracardiac phonocardiography and intracardiac electrocardiography as well as including more material in other chapters. The volume is unique in its field and offers valuable information regarding the cardiac cycle, intracardiac pressure pulses and the technics of right and left cardiac catheterization. Most of the material presented is from the authors' own experience which limits its coverage. The chapters on intracardiac phonocardiography and electrocardiography which are, at present, of little practical importance in cardiac catheterization studies, could well have been left out or replaced with a chapter on the use of dye curves—a much more widely employed technic. The quality of the illustrations remains poor and the continued employment of the phonocardiogram in the pressure tracings for timing purposes will limit the value of the records for most workers who employ the electrocardiogram instead. On page 56, for example, appears an illustration of the pressure tracing from a wedged position in the coronary sinus. Because of tachycardia, systole and diastole are of equal length and in the simultaneously recorded phonocardiogram it is not possible to identify the first or second sounds. Hence, timing of the pressure pulse is impossible. Readers may experience some skepticism about the correct diagnosis of some of the cardiac lesions studied when surgical or anatomical confirmation is not described.

In spite of its deficiencies this volume contains so much information that it should be on the shelves of all laboratories engaged in cardiac catheterization studies.

* * *

PERSONALITY CHANGE AND DEVELOPMENT—As Measured by the Projective Techniques—Molly Harrower, Ph.D., Clinical Psychologist, New York City; Chairman, State Advisory Council in Psychology, New York State; Associate Research Professor of Clinical Psychology, Department of Psychiatry, Temple University Medical Center, Philadelphia. Grune & Stratton, 381 Fourth Avenue, New York 16, N. Y., 1958. 383 pages, $10.00.

In clinical practice, theoretical formulation and research, as psychiatry and clinical psychology have developed they frequently have met at the common ground of projective techniques. Further, as in other areas of behavioral study, the need for follow-up studies has become significant in the effort to determine the effectiveness, short-term or long-range, of psychotherapeutic experiences. Dr. Harrower's text summarizes projective techniques experience with some 4,000 individuals during follow-up periods up to fifteen years.

Several questions are asked in the survey— ". . . to what extent does projective material actually mirror reported change in behavioral adjustment and change in subjective experience? . . . Further, if positive changes are found, do they result from a dropping out of pathologic responses in the second test record, from an increase in positive indices of adjustment, or from a combination of both? Conversely (if subjective reports by the patient and therapist's reports show no change), do the test findings remain unchanged also, or may they even show deterioration—individual changes during periods of normal growth and the passage of five, ten, and fifteen years? Is there such a thing as a 'core personality' which remains relatively unchanged? Are there different types of change introduced by psychotherapeutic techniques, changes not found as a consequence of other experience?"

This is admittedly a large order which the author attempts to meet. For her purposes, she reports a psychological test battery consisting of the verbal part of the Wechsler Bellevue Intelligence Scale, the Rorschach, the Szondi, figure drawings, the Holsopple-Miele Sentence Completion Test, the Most Unpleasant Concept Test, and one or two pictures of the Thematic Apperception Test. After introducing the scope of the study and the need for follow-up studies, Dr. Harrower discusses the problem of retesting with projective techniques and the concept of change, as seen both from the test data and by the therapist.

The main body of test data, interpretations from these, and evaluations by the therapists fill the next three hundred pages and appear as a large collection of anecdotal material. It is difficult to analyze a research design with the test data, projective or other, from individuals of widely differing ages, psychiatric diseases, periods of treatment, successful therapy or lack of it, psychoanalytic and other therapies. Obviously, the main import of the text is for clinical and test study of individuals in a variety of situations, and not an organized research design with *a priori* selection of cases for the matrix to meet design characteristics and sampling requirements.

Among the several conclusions drawn by the author is one which has been reported by many psychologists for some years and again is reflected in the present survey—clinical improvement often appears where the test data do not yet show the change, so there seems a lag before the latter observations are consistent with the clinical studies. The changes in test responses which are reported by the author show clearly the heterogeneity of the sampling and the findings, for of the 24 changes recorded, not more than three were observed for any single individual.

IVAN N. MENSH, Ph.D.

* * *

MODERN TREATMENT YEARBOOK 1958—A Yearbook of Diagnosis and Treatment for the General Practitioner—Edited by Sir Cecil Wakeley, Bt., K.B.E., C.B., Ll.D., M.Ch., D.Sc., F.R.C.S., F.R.S.E. Published for The Medical Press by Bailliere, Tindall & Cox, Ltd., London, 1958. U. S. Distributor The Williams and Wilkins Company, Baltimore, 1958. 312 pages, $6.75.

The 1958 volume of the Modern Treatment Yearbook contains a practical series of articles by British authors on conditions encountered from day to day in medicine, surgery and obstetrics. The various authors have chosen common diseases and conditions on which to write and have discussed treatment for these ailments.

On the whole, the treatment is not as close to the results of clinical research as a comparable American series would be. For example, Chapter 1, on The Management of Congenital Heart Disease in General Practice, is the sort of article which might have appeared in the American literature six to ten years ago. Some of the monographs are more authoritarian than the American reader is likely to accept. There is sometimes a lack of correlation between authors. For example, Chapter 7, on Cervical Erosions, gives very little heed to the use of cytology screening for cervical cancer. (It is mentioned only under postcoital bleeding, on page 56.) On the other hand, this subject is given a thorough discussion in Chapter 12.

An interesting sidelight is the presence of a large number of advertisements in both the front and back of the book. This, too, is a departure from what the average American reader expects; he may accept this in magazines but not in a book.

EDGAR WAYBURN, M.D.

HEAD INJURIES—Mechanisms, Diagnosis and Management—E. S. Gurdjian, M.D., Professor of Neurological Surgery and Chairman of the Department of Neurosurgery, Wayne State University College of Medicine; Department of Neurosurgery, Grace and Detroit Memorial Hospitals; and J. E. Webster, M.D., Associate Professor of Neurological Surgery, Wayne State University College of Medicine; Department of Neurosurgery, Grace and Detroit Memorial Hospitals. Little, Brown & Company, Boston, 1958. 482 pages, $14.00.

In presenting the mechanisms, diagnosis and management of head injuries, the authors have drawn upon an extensive experience in both civilian and military neurosurgery over a twenty-five year period. They have also included data derived from 1,285 cases of head injury treated at the Detroit Receiving Hospital between January 1952 and July 1954, and from 151 consecutively autopsied cases of head injury.

The initial chapter is a brief historical treatise concerning the changing concepts of the mechanism and treatment of head injuries from prehistoric to contemporary times. In a chapter devoid of illustrations, certain anatomic features of the head and craniospinal junction are considered. The scalp, skull, paranasal sinuses, orbits, middle ear, meninges, and intracranial vessels are discussed.

One of the major chapters of the book is concerned with the mechanisms of head injuries. The material which the authors present is based primarily on their own experimental work as carried out through studies with stress coat and strain gauge techniques. Their experimental data represent a basic contribution to this subject, and this section of the text is magnificently illustrated with line drawings, photographs, and x-ray reproductions. Perforating and penetrating injuries as well as those injuries of the temporal bone leading to a disturbance of hearing and equilibrium, and injuries of the orbit and visual apparatus, are all clearly presented. Hyperextension and hyperflexion injuries at the craniospinal junction and cranial nerve injuries are presented in a more superficial fashion. The authors' discussion of the mechanism and anatomic pathology of concussion is based on their own experimental work, and some of their conclusions will not find universal acceptance among other workers in this field. The data concerning histological changes in the brain stem in experimental concussion are described vaguely, and are poorly documented with control studies. Their description of cerebral contusions, lacerations, and edema is presented in a classical manner.

In a separate chapter on diagnostic techniques, roentgenography, angiography, skull trephination, pneumoencephalography, ventriculography, electroencephalography, cerebrospinal fluid studies, and radioactive isotope techniques are all discussed. The authors' emphasis on arteriography and their concepts of its safety will not find universal acceptance.

The authors have attempted to discuss the clinical manifestations of head injury in a separate chapter, and have considered the level of consciousness, vital functions, shock, vomiting, cerebral disorders, headache, dizziness and vertigo, signs and symptoms referable to the ear, eye, and nose, and cranial nerve lesions. Metabolic, electrolyte, and blood changes are briefly discussed, as are the clinical manifestations of the so-called "whiplash injury." Separate chapters are assigned to skull fractures, intracranial vascular lesions, hemorrhages and hematomas, the complications of head injuries, and posttraumatic sequelae. The authors have devoted a special chapter to the aspects of head injury in infants and children, to head injuries in sports, and to medicolegal aspects of head injuries. The final two chapters are concerned with the treatment of head injuries, the first being related to nonsurgical conditions and the second to surgical care. The latter chapter is particularly well illustrated with both photographs and drawings.

The organization of the book has introduced an unfortunate reduplication of many topics throughout numerous chapters. It is not a comprehensive textbook insofar as the experimental aspects of head injuries are concerned, in that the major portion of the data presented is based on work carried out by the authors, and the extensive contributions of others are mentioned briefly if at all. The superficial treatment of such important posttraumatic sequelae as carotid-cavernous fistula, hydrocephalus, and epilepsy is further evidence of the incompleteness of the text. The volume is well illustrated and indexed, and in general, each chapter contains a very complete list of references.

This book presents the experience of two extremely competent neurosurgeons in the diagnosis and treatment of head injuries, and presents the numerous clinical and experimental contributions that these men have made toward the understanding of the mechanism of craniocerebral injury. The volume should find a place in the library of most neurosurgeons.

John W. Hanbery, M.D.

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THE ROOTS OF PSYCHOANALYSIS AND PSYCHOTHERAPY—A Search for Principles of General Psychotherapeutics—S. A. Szurek, M.D., Professor, Department of Psychiatry, University of California School of Medicine, San Francisco, California; Director, Children's Service, The Langley Porter Neuropsychiatric Institute. Charles C. Thomas, Publisher, Springfield, Illinois, 1959. 134 pages, $4.25.

Dr. Szurek has written a very scholarly book on a very difficult subject. In it he searches for some of the general principles that are involved in psychotherapy. He attempts to define the similarities and differences between psychotherapy and psychoanalysis and approaches this task by examining five factors which they have in common: The nature and severity of the patient's disorder; the skill of the analyst or therapist; the frequency of sessions; the total number of sessions or duration of treatment; and lastly, the characteristics of the therapeutic situation, which is to some extent a function of the other four factors.

He does not pretend to completely answer the question he has posed but looks upon his study as an indication of how the question may be approached.

There are many technical points covered, such as the feasibility of a flexible approach to the patient—using more "psychotherapeutic" techniques at first if necessary and then continuing with classical analytic methods when the patient's condition improves. While many analysts will not quarrel with such a thesis, they would emphasize more than is done by Dr. Szurek the difficulties that would be inherent in first lending support to a weak ego and then changing goals and assuming a different role and goal.

In dealing with such points Dr. Szurek is addressing himself primarily to psychiatrists and psychoanalysts as well as to "students in allied fields who are professionally concerned with problems of human behavior . . . and methods of individual clinical work with patients."

It is not directed to the average physician who is usually not too clear about the subtle differences between analytic psychotherapy and psychoanalysis and who is most often called upon to treat or to refer patients with emotional disorders. The language and concepts are probably too technical to maintain his interest or enhance his understanding.

The book, as intended by the author, is a courageous and systematic attempt to explore a subject about which there is, as he suggests, much emotional thinking. Many questions are raised and it is to be hoped that his effort will stimulate others to more clearly define the whole area of psychotherapy.

Norman Q. Brill, M.D.

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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Volume 90 MAY 1959 Number 5

The Rules of Civility

FRANCIS E. WEST, M.D., San Diego

BACK IN THE YEAR 1748, a young man 16 years of age was concentrating on the writing of his own ideas of the "Rules of Civility."

This was a common practice in those days and dated back to the year 1595 when the French Jesuits set forth a list of important objectives in human relationships and deportment.

Today it might be called "How To Win Friends and Influence People." The logic is the same, although the language and terminology then was perhaps more lofty than is used in our current conversations and communications.

I was struck by this rule the young man had inscribed:

"In visiting the sick, do not presently play the physician if you be not knowing therein."

Thirty years later, the boy, then a man of 46, found himself at Valley Forge, the winter headquarters of the ragged, tired, weary and hungry soldiers of the Revolutionary Army. Those stalwarts numbered a scant 11,000 men.

Their leader, the man who had served his own conscience and his fellow patriots for the past three years without one cent of pay, of course, was General George Washington.

Every American knows how, from the depth of despair at Valley Forge, Washington's prayers were answered and he went on to set the Colonies free; that the final peace treaty with England made possible our United States of America.

Our many freedoms, our many rights, the democracy we enjoy today result from the hardships and the suffering and the sacrifices and the determination of George Washington and his 11,000 men.

Here today we meet in free assemblage to speak our minds.

Day in and day out we practice our profession with a freedom circumscribed only by our own rules of civility—our ethics.

Where, in matters of setting standards of qualifications and education of our fellow practitioners, we have found it necessary for governmental regulation, we, the members of the profession, have pressed for that necessary legislation for the protection of our patients against the incompetent, the charlatan and the quack.

The members of the House of Delegates of the California Medical Association represent 17,000 American physicians. Think of it—6,000 more than Washington's entire Army at Valley Forge.

I believe it most fitting, therefore, that before we embark upon the matters before this free and unfettered gathering we pause for a moment to express our reverence to the great man whose 227th birth date anniversary we celebrate today.

Now for the convention affairs at hand.

It has been two years since I was named your President-Elect and assumed the presidency one year later.

During that time it has been my great pleasure to have visited all the county societies, many of the districts and to have attended meetings of specialty groups and to have consulted with officers of the

Address of the President, presented before the Annual Meeting of the House of Delegates of the California Medical Association, February 22, 1959, San Francisco.

Bar and members of the California Hospital Association.

I leave the office with certain feelings of nostalgia because of the fine people I have met and the friends I have made.

To be sure, I have suffered some pangs during my term in office.

On the other hand, your C.M.A. has not been without its accomplishments in the over-all field of medical care for all the people of California.

These accomplishments, to be sure, have largely been the results of the efforts of the highly respected and capable men you have elected to office. I mean my colleagues on the Council who, in turn, have chosen wisely in naming the physician-members of the commissions and committees that have been doing the hard, grinding, time-consuming work of the California Medical Association since the last meeting of this House.

Here, I believe, is an opportune time to name two very important gentlemen who will loom large in the immediate future of C.M.A.

First, there is Dr. T. Eric Reynolds who, on Wednesday, will assume the presidency.

Be assured your affairs will be in good hands.

Eric Reynolds, I have found, is as capable as he is quiet and mild-mannered. And during 1959 you will learn what I already know—that he is a man of sound judgment backed by many years of experience as a practicing physician and in service to his own Alameda-Contra Costa Medical Society and C.M.A.

Next, the report of the Legal Counsel, Peart, Baraty and Hassard, following custom of long standing, will be made by Mr. Howard Hassard. But this year, Mr. Hassard comes before you as *both* our legal counsel *and* our newly appointed Executive Director, named by the Council to direct the internal affairs of C.M.A. I am distinctly proud to make this announcement at this time.

Hap Hassard and his firm, dating back to the days of the dearly beloved Hartley Peart, have served C.M.A. for the past 41 years. He, better than anyone else, knows *all* the workings of our Association. His influence for good has already been felt.

He has our every best wish and our united promise of the utmost of cooperation in the years ahead.

At the close of one's term—reaching the apogee of one's career in the official orbit of the Association—there is, of course, the temptation to "preach"—to prescribe "rules of conduct"—to cut a pattern to be followed in the future—to assume the role of the "elder statesman."

On sober contemplation, however, on taking inventory of my capabilities, it would be presumptuous to address you in such a tone today.

Sober judgment, coupled with hard practicality, makes me realize that, in today's fast-moving world, edicts, warnings, elder statesmanship, predictions are of doubtful value.

And besides—who wants to be considered old?

In addition to those topics I have already mentioned, here then, are some things I *do* know about and can report to you:

For instance, C.M.A. will soon be headquartered in its own new building where our constantly increasing membership can be better served by a staff which, of necessity, has been enlarged to keep pace with our growth.

As to our relations with state and federal bodies, I can only state that, in my opinion, our performance record has merited a mark of "good." Not excellence, perhaps, but "good."

Collectively we can drop to "fair" or to "poor," or we can approach "excellent" in direct proportion to the measure in which we follow Dr. Malcolm Watts' motto on the masthead of our Public Relations Department *Newsletter*. It reads:

> *"What is best for the patient is always best for medical practice and for the doctor."*

California's esteemed Dr. Dwight H. Murray has translated the same statement legislatively in his straightforward declaration that:

> *"Satisfied patients always have been and always will be our first line of defense against government domination of our profession."*

It has been my experience that when we bring these two fundamentals with us into our discussions with all groups—and that includes discussions *within* the profession; when we stand by these principles—we are understood and we are respected.

Understanding is often slow—difficult to achieve. However, once fully understood in our position of concern for patients, we then can expect to earn respect.

The profession is at its best—is understood and believed—when it is concerning itself with matters medical be they in the realm of politics, care for certain segments of our population designated by the elected representatives of the voters, or in the field of voluntary, prepaid medical and hospital insurance.

"General" Dwight Murray can tell you about a mere 7,000 physicians holding the line against Governor Warren and an entire administration's attempt to socialize our profession; how his "tired and weary" physician-soldiers staged a winning battle against medical oppression.

That was 14 years ago, back in 1945.

Members of the legislature believed the physicians' arguments; that the medical profession, the Blue Plans and the private insurance carriers, not

politicians, could best provide medical care insurance for the people of California.

More recently in our negotiations with State Welfare Department officials, the profession prevailed in removing prior authorizations in the care of the aged because we proved that we could be trusted to decide how best to treat our patients.

Likewise, the growth of voluntary health insurance plans attests the public's faith in the profession's knowledge and sincerity in this ever-expanding field.

We can maintain our reputation, our integrity, so long as we meet our expected duties, our self proclaimed responsibilities.

These duties and responsibilities are seemingly small matters to physicians who uphold them every day in their practices and to county societies that insist upon their implementation.

They include the provision of medical care for all regardless of inability to pay.

They include the provision of emergency care on a 24-hour basis.

And they further include the operation of Public Service committees where misunderstandings between physician and patient can be resolved.

Truly, my greatest concern for the future of medicine stems back to the necessity for our constant vigilance to see that these three important promises to patients, to voters are kept.

Once we lose sight of the truths of the Murrays and the Watts' we fail in our duties as individual physicians. Collectively, the profession is then headed for serious troubles. In even simpler words:

> Any regimentation, in my opinion, will not stem from *without*. It can come, however, from a lack of self-discipline and meeting up to our responsibilities *within* the profession.

I mentioned the year 1945 and our 7,000 doctors to emphasize our great growth both in population generally and in the number of physicians. In a manner of speaking we are a new state. We are new in the sense that we've long since made the transition from agriculture to commerce. Much of our population is new! Our physician population has more than doubled in recent years.

But our responsibilities to our patients; the responsibilities of the older physician and the new one to the population, *both old and new*, remain the same. And all residents over the age of 21, may I emphasize, have an *equal* vote.

As members of the House of Delegates of the California Medical Association, the elected representatives of your constituent societies, *you* must assume the responsibility to be ever watchful to see that our standards are maintained and our promises to the public are remembered and fulfilled.

Just what is the California Medical Association?

The booklet sent out to new members of the C.M.A. by Mr. John Hunton states:

"C.M.A. is actually a federation of county medical societies, 40 of them located in all parts of California. Its membership is made up of the combined memberships of the county societies—it has no members except the county society members."

This, then, means to me that C.M.A. encompasses the young general practitioner just starting his practice in Chula Vista or Eureka, the specialists on Sutter and Post streets in San Francisco and on Wilshire Boulevard or in Beverly Hills in the Los Angeles area.

It means the physician in public health, the professor at one of our five fine medical schools, the deans, the researcher, the young resident and our semi-retired elder colleagues. And the new men coming from other states to take up practice in California.

These are the men and women who make up our Association, the second largest—and soon to be the largest—medical Association in America.

You are the men who represent them. . . . All of them.

While you—while we—are gathered here to conduct the organizational phase of our federation of the 40 county societies, an even greater number of our confreres are assembled in meetings throughout the city, conducting or attending scientific phases of our convention.

Present here too are the gentlemen of the press who are here to report the deliberations of this meeting as well as the progress on the research and the scientific side of our profession.

These members of the Fourth Estate are here to report what they hear and see.

Their reports go out all over the state and nation to their readers—the voters—our patients.

I can only hope that what they hear and see in both forums will be constructive; in this assembly for the care of the business of the Association, but, more important, in the assemblies where we are disseminating the knowledge of the progress we are making in the care of our patients.

One final word: I thank you all for the confidence you showed in me when you elected me to office two years ago. It has been a high privilege and a great honor to serve you. I can only hope that I have, in some small measure, lived up to your confidence and to that honor.

There is but one other thing:

As young George came near the close of his "Rules of Civility," he wrote:

> *"Undertake not what you cannot perform, and be careful to keep your promises!"*

2850 Sixth Avenue, San Diego 3.

Tetanus in California

Epidemiology and a Review of 232 Cases

PHILIP K. CONDIT, *M.D.*, Berkeley

• **A study was made of records of the 232 reported cases of tetanus in California, from 1953 through 1958. Cases occurred in 30 of California's 58 counties. Two-thirds of the patients lived in suburban and urban areas. Two-thirds of the cases occurred in persons over the age of 20 years. The incidence was twice as high in males as in females. Forty-seven per cent of the patients died, with the highest death rates being in persons over the age of 40 years.**

Sixty-three per cent of the injuries associated with these 232 cases occurred in the home environment and 17 per cent at the place of employment.

Ninety-one per cent of the patients had never been immunized with tetanus toxoid, or if they had been immunized, had not received the booster injections necessary to maintain effective immunity. Nine per cent gave a history of having had one or more injections of tetanus toxoid within five years.

TETANUS SINCE ANCIENT TIMES has been a much feared, agonizing and highly lethal disease. In recent times medical science has provided effective means for its prevention. Yet in California from 1920 through 1958 there were reported 2,383 cases of tetanus with 1,381 deaths, a mortality rate of 58 per cent.

The purpose of this report is to review certain aspects of recent experience with this disease and stress the importance of wider use of tetanus toxoid for active immunization.

For the period 1953 through 1958 information was collected by the State Department of Public Health, with the cooperation of practicing physicians and local health officers, concerning 232 cases of tetanus. This information, collected for each reported case, on a form entitled "Epidemiologic Case History of Tetanus" has provided the material for this report.

Cases of tetanus have been reported from 30 of California's 58 counties during the past six years (Table 1). One hundred and ten cases occurred in Los Angeles County. The remaining 122 cases were widely scattered: 17 were in Orange County, 12 each in San Bernardino and San Diego counties, 10 in Fresno, 8 in Alameda and 7 or fewer in each of the remaining 24 counties.

Table 2 shows the number of cases reported, the number of deaths and the mortality rate. Although considerably lower than the mortality rate of 82 per cent for the period 1920 through 1924,[1] the rate of 47 per cent for the years 1953 through 1958 was still extremely high.

Who gets tetanus and in what circumstances? Previous reports from other parts of the nation have indicated that tetanus occurs most frequently among inhabitants of rural areas. In this series, however, approximately two thirds of the patients lived in cities, suburban areas and towns. Farm workers who had the disease were outnumbered by skilled

From the Division of Preventive Medical Services, California State Department of Public Health, Berkeley 5.

Assistant Chief, Bureau of Acute Communicable Diseases, California State Department of Public Health, Berkeley 5.

Technical assistance in the preparation of this report was provided by Geraldine B. Edwards, M.P.H., Public Health Analyst, California State Department of Public Health, Berkeley 5.

Presented before the Section on Public Health at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

TABLE 1.—*Tetanus in California by County of Occurrence (1953-1958)*

County	Cases	County	Cases
Alameda	8	San Bernardino	12
Butte	1	San Diego	12
Contra Costa	3	San Francisco	1
Fresno	10	San Joaquin	6
Humboldt	4	San Luis Obispo	2
Imperial	1	Santa Clara	5
Kern	7	Santa Cruz	2
Los Angeles	110	Solano	1
Marin	3	Sonoma	2
Merced	1	Stanislaus	2
Monterey	1	Sutter	1
Orange	17	Trinity	1
Placer	1	Tulare	3
Riverside	5	Ventura	5
Sacramento	1	Yolo	1

TABLE 2.—*Tetanus Cases and Deaths in California, 1920-24 and 1953-58 by Year*

Year	Cases	Deaths	Per Cent of Cases Dying
1920-24	264	216	82
1953	42	18	43
1954	47	23	49
1955	34	16	47
1956	34	14	41
1957	32	16	50
1958	43	22	51
Total 1953-58	232	109	47

and unskilled industrial workers by a ratio of approximately three to one.

Tetanus occurs in both sexes and in all age groups. Two-thirds of the cases reported upon herein occurred in adults. There were 160 cases in males and 72 in females, a ratio of 2.2 to one. The death rate was higher in females (53 per cent) than in males (44 per cent).

The two youngest patients were 17 and 21 days old; each had an infection of the umbilical cord stump. The two oldest patients were an 81-year-old housewife whose foot was punctured by a nail while she was walking in a chickenyard at the rear of her home, and an 81-year-old man whose thumb was lacerated while he was cutting old lumber with a power saw at his home.

When considered by ten-year age groups, children under the age of ten years were the most frequent victims of tetanus; they made up 21 per cent of the total number of patients (Table 3). Tetanus occurred least frequently in young adults 20 to 29 years old; 7 per cent of the cases were in that bracket. However, a considerable proportion of the cases occurred in each ten-year age group from the very young to the very old.

It has been pointed out elsewhere[2] that in tetanus the age of the patient has a definite relationship to the survival rate. Fifty-three per cent of the 232 patients in the present series recovered (Table 3). The highest survival rate, 79 per cent, was in patients in the 10 through 19 age group. The poorest recovery rate, 23 per cent, was in the 70 through 79 age group; and the rates were substantially lower in all age groups over 40 years.

Seventy-eight per cent of the cases and 68 per cent of the deaths in this series occurred in connection with minor injuries (Table 4). The public traditionally associates minor puncture wounds (stepping on a rusty nail) with tetanus. Slightly less than one-third (31 per cent) of the 232 cases reviewed here were associated with minor puncture wounds from nails, slivers, thorns or other sharp objects. Of the 182 cases in the minor injury group, 39 per cent were associated with puncture wounds and 61 per cent with other types of injuries. Twenty-one per cent were associated with lacerations, 16 per cent with abrasions and 8 per cent with crushing injuries to fingers or toes. The remaining 16 per cent were associated with minor lesions and injuries of various types, including burns, blisters, ulcers and ingrown toenails.

In the major injury group tetanus was associated most frequently with lacerations and compound fractures. Gangrenous lesions, abortions, burns, bullet or knife wounds, major surgical procedures and crushing injuries were each associated with five cases or fewer.

Sixty-three per cent of the injuries in the 232 cases occurred in the home environment (Table 5).

TABLE 3.—*Tetanus in California, 1953-1958; Reported Cases by Age Group—Fatality and Survival*

Age Group	Number Cases	Number Recovered	Number Died	Per Cent of Total	
				Died	Recovered
All ages	232	123	109	47.0	53.0
0 to 9	49	32	17	34.7	65.3
10 to 19	34	27	7	20.6	79.4
20 to 29	16	10	6	37.5	62.5
30 to 39	19	12	7	36.8	63.2
40 to 49	37	16	21	56.7	43.3
50 to 59	25	8	17	68.0	32.0
60 to 69	32	14	18	56.2	43.8
70 to 79	17	4	13	76.5	23.5
80+	3		3	All	

TABLE 4.—*Tetanus in California; Cases and Deaths by Type of Injury 1953-58*

MINOR INJURIES Type of Injury	Cases	Deaths
Total	182	74
Punctures:		
Nail	28	14
Slivers	25	11
Other	19	9
Lacerations	38	16
Abrasions	30	11
Crushed finger or toe	16	5
Blisters	4	
Ulcers	4	
Burns (minor)	2	
Infections:		
Ingrown toe nails	6	3
Umbilical cord	2	1
Infected ear	1	
Infected gums	1	1
Infected insect bite	1	1
Tooth extraction	1	
Other minor surgery	4	2

MAJOR INJURIES Type of Injury	Cases	Deaths
Total	46	35
Compound Fractures:		
Highway accident	4	4
Other	8	6
Lacerations	15	12
Gangrene:		
Diabetic	2	2
Other	3	3
Surgery (major)	3	2
Burns (severe)	3	2
Abortion	4	4
Bullet or knife (puncture wound)	3	
Crushed foot	1	
No known injury	4	

TABLE 5.—*Tetanus Cases by Place of Injury; California, 1953-58*

Place	No. of Cases	Per Cent
Total	232	100
Home and yard	145	63
At work	39	17
Highway accident	6	2.2
Other	34	14.5
Unknown	8	3.3

Seventeen per cent occured at the place of employment, 2.2 per cent were received in highway accidents and 14.5 per cent occurred in a variety of other places including the public streets and sidewalks, public parks and playgrounds, abortionists' "offices," vacant lots, a night club and a cow pasture.

Ninety-one per cent of the 208 patients for whom information on this subject was obtained had either never been immunized with tetanus toxoid or had been inadequately immunized[5] in the sense that the last injection of tetanus toxoid had been received more than five years before the injury (Table 6). Nine per cent gave a history of having been immunized within five years. However, detailed information was not obtained with reference to the exact dates of immunization and the number of injections. Immunization histories are not always reliable. People often recall with difficulty and inaccurately information concerning what "shots" they or other members of their family have had and when they were received. In one case, for example, a child lacerated an arm in a fall in the street. A responsible adult in the family informed the attending physician that the child had received the usual immunizations for tetanus, diphtheria and pertussis in the city where the family had formerly lived. On the basis of this information the physician administered a booster injection of tetanus toxoid but did not give antitoxin. Some days later tetanus developed and the child died. Subsequent inquiry revealed that there were nine children in the family and while the records showed that some of them had been immunized, this particular child had not. It is probable that if complete and accurate information concerning their immunization history could could be obtained, some of the 19 patients listed in Table 6 as having had immunization within five years, would be moved over to the category of "inadequately immunized" or "no immunization." Some of them, however, would probably have had low levels of antitoxin simply because they responded poorly to the antigenic stimulus of the vaccine.

The data in Table 6 are in agreement with previous studies in the Armed Forces[4] in which the high degree of effectiveness of active immunization with tetanus toxoid as a preventive measure is well documented.

Twenty-four (12 per cent) of the 196 patients

TABLE 6.—*Tetanus in California, 1953-1958; History of Active Immunization with Tetanus Toxoid Before Injury in 208 Cases*

	No Immunization	Over 5 Years Ago	Within 5 Years	Total
Cases	166	23	19	208
Per cent	80	11	9	100

TABLE 7.—*Tetanus in California, 1953-1958; Use of Antitoxin Prophylactically After Injury But Before Onset of Symptoms*

Amount of Antitoxin	No. of Cases	Recovered	Died
None	196	107	89
1,500 units	20	9	11
3,000 units	3	2	1
4,500 units	1		1

TABLE 8.—*Tetanus in California, 1953-58; Results in 203 Cases in Which Antitoxin Was Used for Therapy After Onset of Symptoms*

Antitoxin (1,000 Units)	Total	Recovered	Died
	203	110	93
Under 50	22	12	10
50 to 99	25	19	6
100 to 149	27	14	13
150 to 199	55	25	30
200 to 249	48	25	23
250 to 299	8	5	3
300 and over	18	10	8

for whom information was provided on this point, received a prophylactic injection of antitoxin at the time of the injury (Table 7). Twenty of these received the usual dose of 1,500 units. While the number of cases is too small to be statistically significant, the 55 per cent mortality rate in this group lends support to investigators who advocate 3,000 units of antitoxin as the minimum prophylactic dose.

An important point is that approximately 65 per cent of the patients in this series did not report to a physician until the onset of clinical symptoms of tetanus. The usual reason for delay was that the initial injury or lesion was considered to be of a trivial nature, requiring only home remedies. For these persons the prophylactic administration of antitoxin was of course not possible.

Data are provided in Table 8 concerning the use of antitoxin therapeutically in 203 cases. It is beyond the scope of this report to discuss the treatment of tetanus but this information is included in tabular form because it is relevant to the general subject.

DISCUSSION

Tetanus is a disease that is only partially controlled, even though basic knowledge would appear to allow successful control.[3] The causative organism is a natural inhabitant of the intestinal tract of man and animals so constant reseeding of these organisms occurs in man's environment. Hence, contamination of man's frequent wounds makes each of us a

candidate for the possible development of this disease.[2] Universal immunization with tetanus toxoid provides the potential means of protection. In this respect the occurrence of tetanus can be considered to be the result of what has been termed "unassimilated progress." An effective vaccine is available but it has not thus far been used on the broad scale that would appear to be desirable for the protection of the civilian population.

Active immunization with tetanus toxoid has become a routine part of pediatric practice. However, since a majority of the cases occur in the adult population, immunization should become, to a larger extent than at present, a routine part of medical practice for all age groups. A continuing effort is needed to inform the public concerning the availability and protective value of active immunization. Coordinated effort by medical and public health workers, for the purpose of achieving the highest possible levels of community immunization against tetanus offer, in the present state of our knowledge, the best hope for the prevention and control of this disease.

2151 Berkeley Way, Berkeley 5.

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Discussion by **DONALD E. ROSS, *M.D., Los Angeles***

Tetanus is indeed a dreadful disease which has impact on the populace and physicians alike. The great tragedy is that the disease could have been virtually stamped out by a program of universal inoculation with toxoid.

Until we have reached this ideal we still are faced with the problem of treating tetanus-prone wounds and of administering tetanus antitoxin with all of its inherent dangers. Certain points may be briefly stressed:

1. The problem constitutes a serious medico-legal hazard.

2. Thorough cleansing and adequate care of the wound should be emphasized.

3. It has been found that the incidence of tetanus is higher when only 1,500 units of antitoxin are used for prophylaxis than when the dose is 3,000 to 5,000 units.

4. When a highly sensitive patient is encountered it is important to (a) Inquire into the history of allergic reaction, and (b) Let the patient know the dangers.

5. Giving a dose of toxoid to a patient who has not been immunized previously with toxoid is without value.

6. It is now well known that the administration of antitoxin is not as effective in a highly sensitive patient as it is in one not so sensitive.

7. The foregoing shortcomings have led the profession into other fields of research:

(a) Antibiotics of the tetracycline group have been found effective for the prevention of tetanus in animal experimentation. This has not been satisfactorily proven for humans. Evidence is accumulating, however, which gives promise that this group of antibiotics will be effective.

(b) The Cutter Laboratories have prepared a Hyper-Tet gamma globulin fraction from humans who have been hyper-immunized with tetanus toxoid. This preparation would not cause allergic disease or serum sickness.

(c) Transfusions of blood from toxoid-immunized persons are believed to be of value in the treatment of tetanus in highly sensitive patients.

Tetanus

Prophylaxis and Treatment of the Disease

DONALD E. ROSS, *M.D.*, and J. J. KRAUT, *M.D.*, Los Angeles

• **Cleansing and debridement is paramount in dealing with tetanus-prone wounds (severe crushing injuries, piercing wounds, blisters and burns are outstanding examples, particularly if contaminated with dirt, grass or other debris).**

Prophylaxis then is relatively easy in persons who have been actively immunized by toxoid injections. For them, a "booster" injection is indicated.

Use of antitoxin, however, is hazardous, whether for prophylaxis or for treatment of the disease. Since it may in itself cause severe disease, including anaphylactic reaction and serum sickness, decision to use it must be weighed against the possibility of the development of tetanus in each case.

To prepare for use of it, careful history should be taken, with particular reference to sensitivity to horse dander. Dermal tests, and perhaps ophthalmic tests, for sensitivity to the serum should be carried out. Even the tests may be hazardous and precautions should be taken accordingly.

If it is decided that the use of antitoxin is necessary even though the patient is sensitive to the material, desensitization must be carried out promptly, with adequate preparation for severe reaction.

There is experimental evidence that antibiotics of the tetracycline group, given soon after injury, may have prophylactic effect against tetanus.

TETANUS IS SO HORRIBLE and terrifying a disease that the force of its impact is felt by the public and the medical profession alike.

Many phases of our understanding of tetanus are still controversial. One purpose of this article is to help clear the atmosphere and bring about a better understanding of prophylaxis and treatment of the disease. It is hoped also to stimulate physicians to urge public awareness that widespread inoculation with tetanus toxoid is a matter of great importance. The following data state the case cogently:

In California[10] from 1920 to 1954 there were 2,240 cases of tetanus in humans; 1,313 of the persons who had it died.

Tetanus developed in only one of 160.254 persons wounded in battle during World War II.[9] (A tetanus toxoid immunization program for all members of the armed forces was meticulously carried out.)

BACTERIOLOGY AND PHYSIOPATHOLOGY

Clostridium tetani is a spore-bearing anaerobic bacillus. It is present in the intestinal tract of a large proportion of horses and cattle. About 5 per cent of all humans are carriers, but the proportion reaches 20 to 30 per cent among persons who are in close contact with animals.

In almost all cases of the disease the infection remains localized in the wound of entrance, although in rare cases the causative bacteria have been found in lymph nodes. Rarely does the organism enter the circulating blood.

The method of transport and action of the toxin is still a controversial subject. In 1903 Meyer and Ransome[11] concluded from their investigations that the toxin acted directly on the central nervous system, reaching it by way of the regional nerve trunks and spreading upward along the neural pathways in the spinal cord itself. Abel[1] conceded that the toxin may act locally on regional nerves and cause spasms of the muscles supplied by the affected nerves but contended that the toxin is distributed by absorption into the circulating blood.

The action of the toxin in selectively blocking inhibitory synapses in the central nervous system appears adequate to explain the phenomena of tetanus. Excitory impulses multiply and run through reflex pathways unchecked and uncoordinated to produce the muscular spasms so characteristic of the disease.

Submitted January 12, 1959.

From the Ross-Loos Medical Group, Los Angeles 17.

TETANUS-PRONE WOUNDS

Severe crushing injuries and compound fractures are outstanding examples of tetanus-prone wounds. This is particularly true if they are contaminated with dirt, grass and other debris. Often the organism develops in penetrating wounds, most frequently of all in wounds made by splinters; but even minor injuries such as blisters or pricks from rose thorns or needles are also frequent causes. Any burned surface is dangerous, for the bacillus of tetanus may be harbored under the blisters or encrustation.

Early and thorough treatment of the wound is most essential. No amount of antitoxin will prevent tetanus if dead tissue and foreign substances are

permitted to remain deep in the tissues. Wounds should be washed thoroughly with soap and water and copiously irrigated with saline solution. Penetrating wounds should be uncapped by removal of the superficial skin. Some wounds may be excised. All should be opened wide to facilitate removal of all dead tissues, blood clots and foreign bodies. If bone, tendons, vessels or nerves are exposed, they must be covered by sliding the skin over the wound or by skin grafting. Debridement and cleansing in these cases must be particularly meticulous.

PROPHYLAXIS AGAINST TETANUS

The ideal prophylaxis against tetanus is active immunity brought about by injections of toxoid and sustained by periodic injections. Passive immunization—that is, the immunization or prophylaxis that is hoped for when antitoxin is given—entails considerable hazard and should be used only in situations of calculated risk. In some cases it might have to be foregone if the risk is too great.

The incidence of reactions to toxoid is 0.0237 per cent. Delayed serum sickness reactions to antitoxin occur in 30 to 40 per cent of patients.

Active Immunization

Active immunization is accomplished by giving three tetanus toxoid injections of 0.5 cc. each, the second injection to be given 30 days after the first, and the third six months after the second.

To be effective, the course of toxoid inoculations must have been completed at least 30 days before the occurrence of the wound. Toxoid given at the time of injury to a patient who has not had a toxoid series of inoculations is without value. In no such circumstances can toxoid be a substitute for antitoxin.

Active immunization is particularly important for persons who are so sensitive to horse dander that contact brings on a severe asthma attack, because giving antitoxin to such a person, should the need occur, might be dangerous.

Basic immunity produced by a series of inoculations of toxoid declines with the passing of time. It is necessary, therefore, to give a booster injection every four to five years. It is interesting that following these subsequent doses, the blood antitoxin increases to a higher level than that produced by the primary two or three doses of toxoid.

The duration of the immunity so produced is unknown, but there is a growing conviction that it may last eight to ten years or even longer.

It should be borne in mind when treating a tetanus-prone wound that even naturally acquired immunity following recovery from an attack of tetanus is not lasting. Further, a prophylactic dose of tetanus antitoxin produces no lasting immunizing effect.

For children a trivalent vaccine—Diphtheria-Pertussis-Tetanus (DPT)—is recommended for the first five years of life; then the bivalent diphtheria-tetanus (regular) vaccine for ages six to eleven years and the diphtheria-tetanus (adult) vaccine for persons twelve years of age and over, with a booster injection every five years. Parents—and children, too, when old enough to remember—should be made aware that injections of toxoid are being given, should be firmly informed that booster doses are necessary and should be impressed with the importance of being able to inform another physician, should occasion arise, not only that immunization has been carried out but the date of the last booster.

The occurrence of tetanus in infants is alarming. In one recent year more than one-third of all deaths from tetanus in the United States occurred in patients less than one year of age. Immunization of the prospective mothers by toxoid would give a measure of protection to the newborn infant. Significant levels of antitoxin have been demonstrated in infants whose mothers previously received toxoid.[14]

Passive Immunization

Since there is risk associated with the administration of a prophylactic dose of tetanus antitoxin, it is important to determine which wounds are such as to make the prophylactic use of antitoxin advisable. Obviously in the more serious cases antitoxin is almost mandatory, assuming, of course, that there has been no active immunization. The great problems are small wounds. The decision must be the physician's to make. In general, he may decide to withhold antitoxin in the case of a superficial wound that can be excised or adequately cleansed. If he decides that antitoxin is necessary, he should fully acquaint the patient with all the difficulties and risks of complications.

Dosage of Antitoxin in Prophylaxis. The usual dose of antitoxin given in prophylaxis has been 1,500 units. There is a distinct trend toward larger doses. Now 3,000 to 5,000 units is more generally acceptable. Many investigators now believe that in dealing with a patient who has a very severe, mutilating injury, a dose of 10,000 units or more is suitable. Using continuing doses of antitoxin daily or every other day until the danger is over is not considered proper for prophylaxis, since sensitization increases with each subsequent dose and tetanus would be more difficult to treat if it should occur.

Should a tetanus-prone wound be encountered several days after its occurrence, it still may not be too late for antitoxin, but a much larger dose of it—10,000 units at least—should be given.

Prevention of Reactions to Antitoxin

(a) *History of Allergic Tendencies.* It is essential to inquire carefully as to history of possible allergic sensitivity before giving any antitoxin. Most im-

portant is a history of asthma precipitated by contact with horse dander, for it is probable that the subject is highly sensitive to horse serum in any form and that administering antitoxin to him might be virtually impossible.

(b) *Tests for Sensitivity and for Reaction.* Before giving antitoxin, a test for sensitivity must be done. For this, an intradermal test and sometimes an ophthalmic test may be carried out.

For the average physician the intradermal test is the most practical. It is performed by injecting 0.02 cc. of 1:10 dilution of antitoxin intradermally. Using precisely that amount is important, for "readings" of reaction are unreliable otherwise. The same amount of normal saline solution is injected into the other arm as a control. The site of injection is kept under close observation for 15 to 20 minutes and if no local or constitutional reaction occurs, the result is "negative" and the required amount of antitoxin may be given subcutaneously with little fear of serious reaction.

Many authorities[2] believe that the ophthalmic test has a definite place in dealing with patients with a history of allergic disease. If the skin test for sensitivity to antitoxin is negative but there is history suspicious of allergic disease, the ophthalmic test is advisable. If the reaction to it is positive, it is a warning that any desensitization process or the administration of antitoxin may be hazardous.

The test is done by placing one minim of diluted horse serum (1:10 or 1:100) in the lower conjunctival sac of one eye and one minim of normal saline solution in the other. Lacrimation, redness and itching following the instillation of the horse serum, appearing immediately or 15 to 20 minutes later, are "positive" results; the absence of any of these manifestations is "negative."

The ophthalmic test is not without risk. Severe reaction may cause corneal injury and impairment of vision. To prevent this complication, epinephrine should be administered by dropping it into the eye (one drop of 1:1000 dilution) immediately upon the appearance of the first sign of severe reaction.

Rarely does a skin test show serious sensitivity reaction in a person with no history of hypersensitivity, and for such persons it is considered proper to perform the skin test in the average physician's office. Then, if there is no dermal reaction to the test, it is deemed relatively safe to administer the prophylactic serum subcutaneously. But if there is positive reaction, the patient must undergo a desensitization procedure.

Subcutaneous Desensitization and Prophylaxis

If there is a history of allergic disease in addition to the positive reaction to the test, desensitization is fraught with danger. To cope with any eventuality, the physician who carries out this work should have at hand a tourniquet, blood pressure apparatus, glucose and saline solutions for intravenous use, oxygen and mask and a tracheotomy set, epinephrine 1:1000 solution, Benadryl®, aminophylline and levarterenol bitartrate (Levophed®), nikethamide and agents for rapid digitalization. Unless all these facilities are readily available, the desensitization process had better be performed in a hospital where everything necessary is on hand and trained personnel is available.

If sensitivity to the antitoxin is demonstrated, further skin testing in series must be done, using successively more dilute solutions until one that causes no reaction is arrived at. That dilution is used as the basis for further desensitization procedures. Desensitization must be done with extreme care, particularly if the reaction to the first test was strongly positive.

A hypothetical example of the method follows:

The skin test is repeated until a dilution is reached at which no reaction was experienced. This dilution is, say, 1:1000. The desensitization then is carried forward, using this dilution for the first dose, then gradually increased doses at gradual increases in concentration as follows:

Dilution:	
1:1000	0.10 cc. if no reaction in 20 minutes
	0.20 cc. " " " " " "
	0.40 cc. " " " " " "
	0.60 cc. " " " " " "
1:100	0.10 cc. " " " " " "
	0.20 cc. " " " " " "
	0.40 cc. " " " " " "
	0.60 cc. " " " " " "
1:10	0.10 cc. " " " " " "
	0.20 cc. " " " " " "
	0.40 cc. " " " " " "
	0.60 cc. " " " " " "
Concentrated serum	0.10 cc. " " " " " "
	0.20 cc. " " " " " "
	0.40 cc. " " " " " "
	0.60 cc. " " " " " "

Administration is continued in this manner until 5,000 units had been given as a prophylactic dose.

In this desensitization procedure, if a local reaction develops such as a wheal or erythema at the site of the injection, the safest method is to go back one step and increase the dose more slowly, keeping it at dilutions that do not cause any local reaction.

Should any constitutional reaction appear—hives or generalized itching for example—and wheezing appear with it, the desensitization should be interrupted for intramuscular administration of 0.30 cc. of 1:1000 dilution of epinephrine and intravenous injection of 0.50 cc. of Benadryl® or Chlortrimeton® (5 to 10 mg.). It is advisable to wait 30 minutes

after the cessation of the symptoms of the constitutional reaction before continuing the desensitization, using half the dose that caused the reaction until the required amount of serum is given.

If anaphylactic shock is induced by the sensitization therapy, it must be vigorously treated in a manner described in a later section of this communication under Reactions to Antitoxin.

Intravenous Administration of Antitoxin

The intravenous administration of tetanus antitoxin is limited to the treatment of the disease and is not used for prophylaxis. Before giving antitoxin intravenously, it is mandatory not only to do a careful skin test (some physicians also use the ophthalmic test) but also to test further for sensitivity by giving small doses of antitoxin intravenously and carefully observing the result.

If the reaction to the preliminary skin test is negative, the intravenous test is done by diluting 0.5 cc. of antitoxin with 10 cc. of normal saline solution and injecting 0.5 cc. of this mixture as slowly as possible. If no signs of local reaction appear and there is no significant fall of blood pressure, the patient will usually tolerate the full required amount of the serum.

If there is a positive reaction to the skin test, it must be repeated in series, using successively greater dilutions of the serum until there is no dermal reaction. The final dilution that produced no dermal reaction is the basis for intravenous desensitization and administration. For example, assuming that the serum that produced no reaction was a dilution of 1:1000, the desensitization program is then begun by placing 1 cc. of this dilution in an infusion flask containing 100 cc. of normal saline solution, and this is given by slow intravenous drip. If no reaction develops in the first hour, further doses gradually increasing in strength are administered until the required amount is given. Should constitutional symptoms develop during the administration, the procedure must be stopped and these complications treated. Half an hour after cessation of the constitutional symptoms, the administration may be resumed, but with weaker dilutions, until the patient has received the required amount of antitoxin.

REACTIONS TO ANTITOXIN

Most of immediate reactions are relatively mild, consisting of a wheal, erythema, induration and itching, and usually can be relieved by the oral administration of antihistamines or epinephrine 1:1000 given subcutaneously in a dosage of 0.2 to 0.3 cc.

Occasionally, asthma, wheezing and even edema of the larynx and lungs develop. These reactions are treated by epinephrine (0.3 to 0.5 cc. of 1:1000 dilution intramuscularly) and antihistamines (Chlortrimeton® 5 to 10 mg.) given intravenously. Aminophylline 0.25 gm. to 0.45 gm. in 20 cc. of saline solution infused by vein very slowly (8 to 10 minutes) may be helpful in relieving pulmonary symptoms.

Severe Reactions of Anaphylactic Type. Such reactions develop immediately. One of the early symptoms is a fall in blood pressure, and when this occurs the patient should be immediately placed in the Trendelenburg position.

Other symptoms that may be noted are general weakness, cough, wheezing and generalized itching and hives. Flushing of the skin soon gives way to pallor, cold and sweating. The first step in dealing with the emergency is to give 0.2 cc. of 1:1000 epinephrine at the site of the serum injection to slow the absorption by producing vasoconstriction. Epinephrine (0.3 to 0.5 cc. of 1:1000) is injected into the other arm at 15-minute intervals as indicated. In addition there may be need for administration of oxygen, phenylephrine (Neosynephrine®), levarterenol bitartrate (Levophed®), hypertonic glucose and rapid digitalization. Tracheotomy may be indicated.

Delayed Serum Reactions. Delayed serum reactions are those that do not occur until several hours after the serum administration, and usually they are not serious in character.

Accelerated Serum Sickness. Serum sickness may develop as early as 24 to 48 hours after administration of serum. The early appearance of symptoms often heralds a severe type of serum sickness.

Late Serum Sickness. The vast majority of cases of serum sickness fall into this category. Symptoms do not appear until 7 to 14 days after administration of antitoxin. Usually the symptoms are mild, consisting of hives and itching. Response to antihistamine therapy is usually prompt. But if the prodromal symptoms do not improve rapidly, they often become intensified and a serious type of serum sickness develops. Malaise, fever, adenopathy, angioneurotic edema of the lungs, pleuritis and pleural effusion may occur in addition to the local manifestations. Angioneurotic edema, hives and asthma usually can be relieved by giving 1:1000 epinephrine or 0.05 mg. of ephedrine. Respiratory difficulties can be lessened by intravenous administration of 0.25 to 0.50 gm. of aminophylline in 20 cc. of 5 per cent glucose solution. It is most important to give these agents very slowly. Steroid therapy is most effective for patients who do not respond to antihistamines. It may be begun by giving corticotropin (ACTH) 40 to 60 mg. intramuscularly or 10 mg. (in 1000 cc. of 5 per cent glucose solution) intra-

venously. Prednisone or prednisolone, 4 to 5 mg. three to four times daily, usually relieves the symptoms of the serum disease after a period of two to three days. Since side effects of such treatment are not unusual, the doses should be reduced as the symptoms diminish and discontinued as soon as they are fully abated. Steroids are contraindicated in the presence of active tuberculosis, but if treatment with them is decided upon as a calculated risk in such cases, double doses of antibiotics (500 mg. of Achromycin or Aureomycin four times a day) should be given at the same time. Diabetes is another contraindication, for diabetic coma may develop; and still another is duodenal ulcer, which may be aggravated by steroid therapy.

Generalized itching can be relieved occasionally by the use of procaine solution, 1.0 to 2.0 gm. in 500 to 1000 cc. of 5 per cent glucose by slow intravenous drip. Administration should be slowed or stopped if toxic symptoms such as hyperexcitability develop.

Long Enduring Complications

Fatal complications are rare, but do occur; and it must be recognized that disabilities following severe anaphylactic reactions and serum sickness may persist for a long time.

Neurologic complications occasionally accompany or follow a severe serum sickness. They vary widely from localized neuritis to generalized polyneuropathy.[12,13] The most common is brachial neuritis; and sciatic neuritis is not uncommon. Complications of this kind are often resistant to therapy for weeks, months or even longer.

Substitutes for Horse Serum Antitoxin

Bovine antitoxin produces the same complications as does horse serum in at least 75 per cent of cases. Morcover, it is not always readily available.

Despeciated horse serum* is available. Some of the "impurities" have been removed but the dangers of allergic sensitivities still exist.

Hog and sheep serum are not suitable substitutes.

The Role of Antibiotics in Prophylaxis

It has been shown conclusively that tetanus can be prevented almost always in animals by the use of antibiotics of one of the tetracycline group.[14] On the basis of these animal experiments, it is presumed that in humans, if a tetracycline is given intramuscularly shortly after injury in doses of 500 mg. every eight hours for three to five days, tetanus will not develop. There has not as yet been a sufficient number of humans treated in this manner to permit firm conclusions, but the data that is accumulating is encouraging.

*Treated with an enzyme to break down protein molecules.

SYMPTOMS AND TREATMENT OF TETANUS

The incubation period of tetanus may be no more than one day but the average is 14 days. Symptoms may occur within a day after the injury through which the organism entered. Early development of symptoms always presages a severe and dangerous course. The mortality is in inverse ratio to the time of onset. Since prompt treatment is important, the physician must be alert for the first signs of tetanus. Occasionally the first symptom is local twitching of the masseter muscle.

As soon as a diagnosis is made, the patient should be placed in a secluded, quiet and darkened room. Visitors should be banned, for any stimulus might bring about severe spasms or even convulsions. Trained nursing care is important and the patient should not be left alone.

The wound should be opened widely at once and debridement and irrigation carried out. Total excision of the wound is advisable where possible. Getting rid of the focus of infection is of utmost importance. This has been extended to amputation of a finger or even of a limb in cases of serious infection at the site of compound fracture. Bower[3] said that he had never known a patient in such circumstances to recover unless amputation was done.

Administration of tetanus antitoxin is the standard basic treatment for tetanus, for it is the only agent that will neutralize circulating toxin. It must be given as quickly as possible after the onset of symptoms to prevent the toxin's becoming fixed to nerve tissue. Tetanus toxin has been demonstrated in the circulating blood as long as 48 hours before the appearance of symptoms.

The initial dosage of antitoxin is somewhat controversial, but there is a very definite trend toward larger doses. It is the belief of the authors that at least 200,000 units should be given, half of the amount subcutaneously and the remainder, with caution, intravenously. Bower[3] said that the curative dose is somewhere between 160,000 and 350,000 units. Intraspinal administration is dangerous and has been abandoned.

The intravenous administration of tetanus antitoxin is fraught with danger. It must be borne in mind that the patient may have been sensitized by the prophylactic dose of antitoxin. Careful testing for sensitivity is mandatory, for a severe reaction may cause death. Since repeated doses may sensitize the patient, all serum should be given in the first 48 hours.

Sedative, anticonvulsant and muscle-relaxing agents are most helpful and are used routinely. The numbers and varieties of drugs that have been used are legion. Among these are bromides, amybarbital, chloral hydrate, various barbiturates, and procaine

(1 per cent) used intravenously. Morphine and meperidine are too depressing.

Recently, the best results have been obtained from the following: Tribromoethanol solution (60 to 80 mg. per kilogram of body weight); mephenesin; phenobarbital with mephenesin; mephenesin, barbiturates and chlorpromazine; calcium bromide and chloral hydrate.

Since respiratory complications are the direct cause of death in 80 per cent of fatal cases, a clear airway is important. Tracheotomy may be life saving.

Feeding the patient by the use of a Levine tube maintains the strength. Some observers have suggested gastrostomy but the authors consider this too drastic.

Use of penicillin to combat respiratory symptoms has reduced the mortality. Recently it has been suggested[4,14,15] that antibiotics of the tetracycline group are more specific and evidence is accumulating that they may be useful in human subjects. Florey[8] reported a case of tetanus in an infant who did not respond to antitoxin and penicillin. Chlortetracycline was then used and was credited with saving the life.

Blood transfusions may be of definite value, especially if the donors are known toxoid-immunized subjects, for blood from them may have a very definite specific effect.

It may be noted that when treating children with antibiotics, it is advisable to give, in addition, some gamma globulin, since there is a deficiency of this substance in the first year of life.

Corticosteroids have been tried in the more severe cases of tetanus[5] but they have not been proved to be useful and the authors look upon them with disfavor for the purpose, in light of the fact they are known to depress antibody formation.

DISCUSSION

There are many differences of opinion as to methods of treating patients with tetanus. Some observers[6,7] believe that using epinephrine and Benadryl® in the same solution with the antitoxin will prevent reactions and aid absorption of the serum. The authors do not believe these methods are advisable, since they may obscure a dangerous reaction. Moreover, the drugs themselves may be poorly tolerated. Probably as many patients are hypersensitive to Benadryl® as to the serum itself.

Some investigators[2] emphasize the value of the ophthalmic test while others[3] declare it obsolete. The authors like and use the ophthalmic sensitivity test but the intradermal test is the basic one in use.

Bower[3] has expressed distrust of a negative reaction to a skin test for hypersensitivity and would rely rather on the blood pressure response. The authors believe the blood pressure is an important index but ought not exclude dermal tests.

947 West Eighth Street, Los Angeles 17 (Ross).

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Late Postoperative Intestinal Obstruction

ANGELO M. MAY, *M.D.*, San Francisco

• **Early postoperative intestinal obstruction is most successfully treated with intestinal intubation with a long intestinal tube of the Miller-Abbott, Harris or Cantor type, and only when this fails is reoperation indicated. However, late postoperative intestinal obstruction is better treated by operation as soon as the diagnosis is established and the patient is prepared for the procedure.**

Decompression of the bowel at the time of operation has become a procedure of choice and it is now possible to completely decompress the bowel in the course of the operation using a Foley catheter inserted through a stab wound in the bowel. Details of the technique are described in this article.

EVEN UNDER MODERN CONDITIONS the mortality from intestinal obstruction is high. Early observers, summarizing cases from various sources from 1907 to 1931, gave figures ranging from 32 to 61 per cent. Present experience is perhaps a little better. The cause of death in acute intestinal obstruction is a problem that has engaged the attention of physicians and investigators for over a hundred years. The disease is often dramatic in the suddenness of onset and the rapidity of course. The literature abounds with experimental as well as clinical laboratory data that indicate a variety of nefarious processes that work to deteriorate the condition of the patient.

It is generally recognized that the following factors contribute toward the circulatory failure resulting in early death in untreated or unsuccessfully treated intestinal obstruction:

1. *Disturbance of fluid and electrolyte balance.* As the intestine becomes distended with fluid and nitrogen, the reabsorption of water and electrolytes from the intestinal tract becomes impaired, which results in progressive depletion of water and electrolytes in the intracellular and extracellular compartments. Electrolyte studies of the serum readily reflect these changes.

2. *Circulatory changes.* Distention and incarceration occludes circulation of blood and hence interferes with motility and the functions of absorption and digestion. In these circumstances, the bowel wall is subject to invasion by pathogenic organisms of many kinds, as well as by bacteria ordinarily nonpathogenic, and a large surface of tissue thereby becomes involved in an acute inflammatory process.

3. *Toxins.* Bacterial toxins that develop from bacterial action in the bowel dissipate throughout the body and by action upon the vascular system cause shock and other manifestations of systemic poisoning.

4. *Abdominal distention and splinting of the thorax.* Abdominal distention, with its restriction of the motion of the diaphragm and splinting of the chest in general, results in cardiopulmonary changes which are of considerable importance in the presence of the already serious circulatory changes just mentioned.

5. *Local sepsis.* The embarrassment of the circulation of the distended incarcerated loop of the bowel involved may result in gangrene, rupture or abscess formation in the localized area of obstruction, a serious and potentially lethal situation in itself.

There are many more components in individual cases which join in the deteriorative process, but in the majority of cases, the factors mentioned should be considered first in the plans for management.

The work of Wangensteen, Cantor, Harris, Abbott and Maddock in our time, particularly their statistical studies indicating a low mortality rate if treatment is begun early, has developed a general awareness that prompt operation is the *sine qua non* in the late treatment of intestinal obstruction. Those investigators have also indicated that most other methods and features of treatment are ancillary, and mainly of great value in the preparation of the patient for the operative procedure or to sustain him during the period when diagnosis is indefinite. The features of early diagnosis and the laboratory and radiological data which confirm the clinical picture are so well documented that they need not be discussed here.

Wangensteen was the first to demonstrate clearly the value of decompression in the management of intestinal obstruction. He used a Levine tube and continuous suction. Miller, Abbott, Harris, Cantor and others furthered the treatment of intestinal obstruction with a long intestinal tube with a balloon feature that facilitates the threading of the tube through the intestinal tract. Maddock showed that in early postoperative obstruction, the mortality rate is lower with the long tube treatment than with im-

Submitted February 2, 1959.

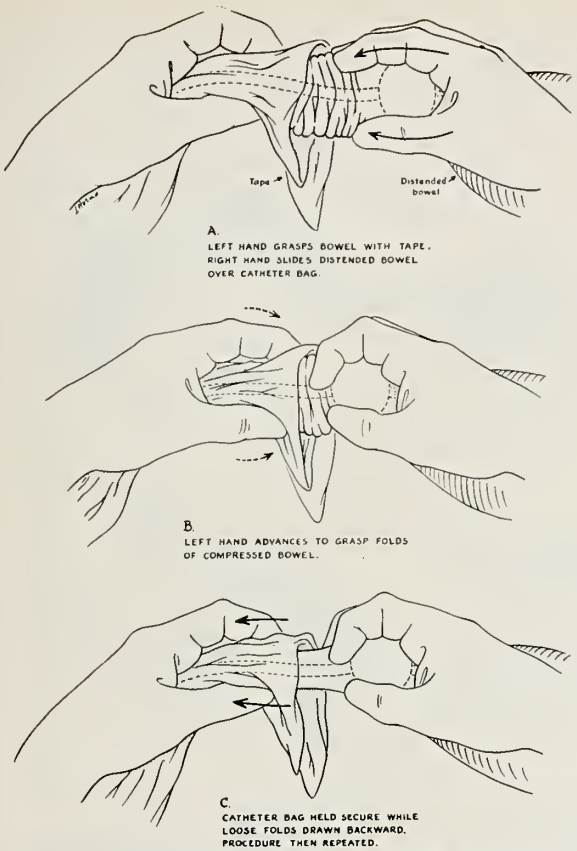


Figure 1.—Method of advancement of ball-tip of catheter through intestine.

mediate secondary operation, and that the reverse is true in cases in which a considerable time has elapsed between the initial operation and the development of obstruction.

Before the era of antibiotics, the opening of an intestine in the presence of obstruction was considered a formidable procedure owing to the hazard of spillage and peritoneal soiling. However, attempts were made to empty the bowel by means of a needle or trocar attached to suction. Cantor found it possible to thread the bowel on a special long decompression suction tip and emphasized the importance of this maneuver.

Wangensteen employed an ordinary French catheter with some degree of success, but this method was not widely applicable owing to difficulty in threading an ordinary catheter very far into the bowel. With the preoperative introduction of the ballooned long tube, it was advocated and occasionally found possible to manually thread the long tube through the bowel from its position in the upper bowel at the time of operation. However, this also sometimes was extremely difficult, particularly when the obstruction was in the lower abdomen.

In 1946, the author began to use the method of introducing a Foley catheter into the bowel at operation, and found the advantage that when the water bag on the catheter was distended, it was possible to draw the catheter through the entire length of the small bowel, first one way and then the other, and thereby completely deflate the intestine at the time of operation (see Figure 1). As experience with this method was obtained, it became apparent that it was possible to prevent spilling through proper introduction of the catheter into the intestine, possible to handle the intestine with great care, and to avoid shock in the handling of the intestine. By this means the bowel could be emptied in situ within the abdomen before it was threaded onto the catheter. Even with the abdomen greatly distended, it was possible to open it and apply this method quickly to empty the bowel and find the point of obstruction.

The procedure is begun by opening the abdomen through a right rectus incision (Figure 2). A distended loop of bowel always rises into the incision as soon as the peritoneum is opened. Whereupon, without delivering the loop, a segment is compressed by a surgical assistant between the forefinger and thumb of his right hand, then the left hand is placed in approximation to the right hand and a small segment of the bowel is emptied of gas and fluid by a pressing, stripping motion between the two forefingers and thumbs. In this emptied segment of bowel, a pursestring suture is placed by the surgeon, and the bowel then is opened and the Foley catheter, which has been attached to the suction, is introduced quickly into the opening and the pursestring suture made taut, closing the bowel snugly about the catheter. The water bag, already tested and attached to the syringe of fluid, is then injected with 10 cc. of sterile saline solution and the butt end secured first by clamping, then by ligation.

Only light suction is used lest the tip of the Foley catheter cleave to the mucosa of the bowel. It is not necessary to determine which way the tip is pointed. With the distended water bag used to advance it, the Foley catheter is pulled through the bowel until the segment is emptied. It is then easy to determine whether the catheter has traveled proximally or distally, for by then a considerable amount of bowel is threaded on it. The first objective in the introduction of the catheter, of course, is to reduce the distention; determining the site of obstruction comes later. If the obstruction is encountered during the first advance of the tube, well and good. It is then relieved and the tube need not be advanced far into the ileum, but it must be withdrawn and threaded into the proximal small bowel until satisfactory deflation is accomplished. Whatever the circumstances, the Foley catheter in each case is followed upward to the proximal jejunum and downward to the region of the ileocecal valve to assure the patency of

the entire length of the small intestine. As obstructions are encountered, adhesions are released and the bowel wall repaired as the occasion requires.

It is well to point out certain precautions to be taken in the use of this method. It is important not to place the pursestring suture until the segment of bowel to be used for insertion of the tube is emptied and kept collapsed by digital compression. Inser-

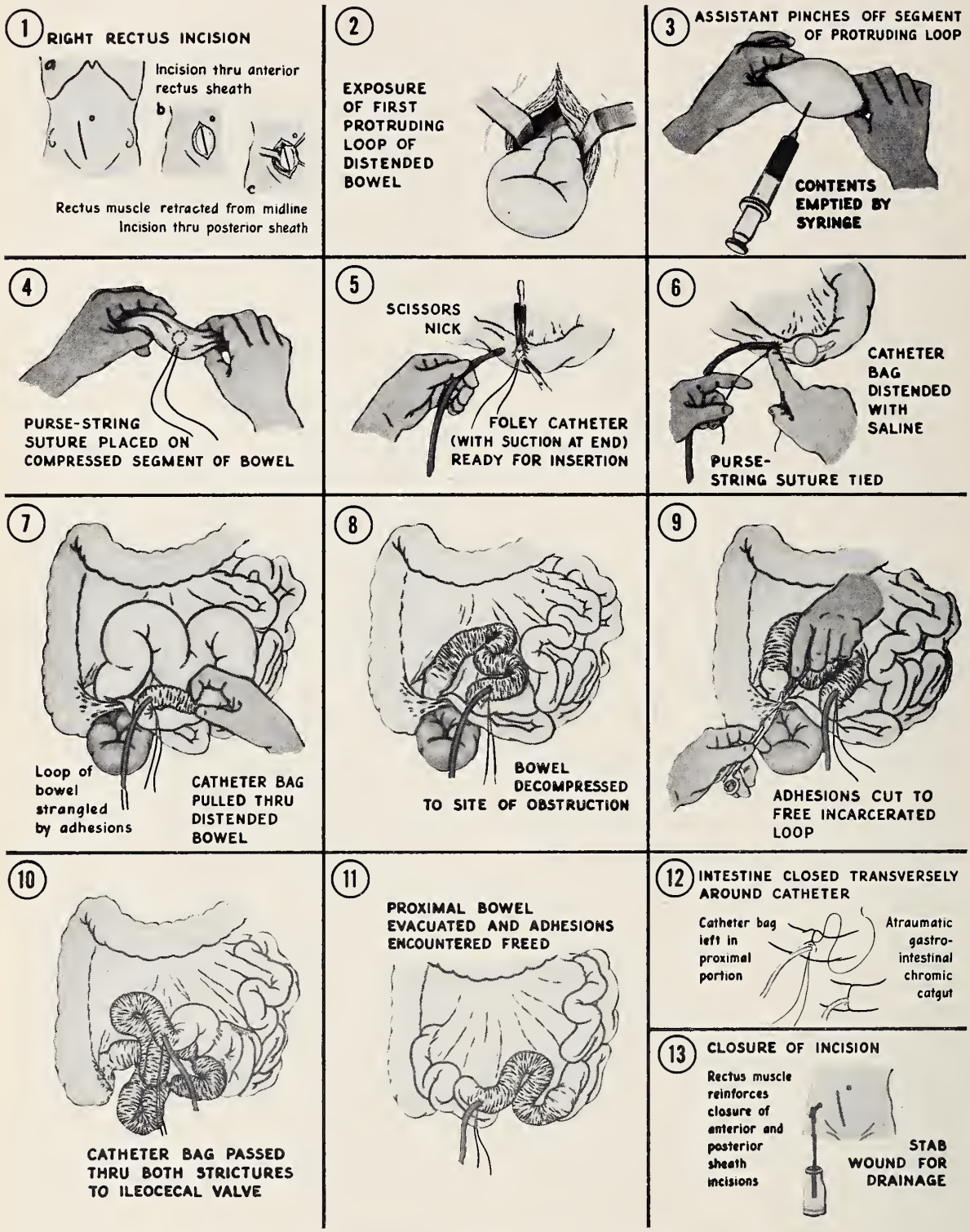


Figure 2.—Procedure for decompression of bowel and reduction of intestinal obstruction.

tion of the sutures while the bowel is still distended may cause material to spurt from it. Unless it pushes through the incision spontaneously, the bowel ought not be removed from the abdomen for introduction of the catheter, for laden and distended as it is it might split open or the mesentery might tear during manipulation. Once emptied, the bowel can easily be taken from the abdomen and inspected its entire length.

A laparotomy tape placed about the site at which the tube is to be introduced will absorb whatever leakage occurs. After decompression and the freeing of the obstruction, other adhesions which appear likely to lead to further obstruction should also be freed.

Besides serving for decompression, the Foley catheter is brought out through a stab wound in the side as a temporary ileostomy. When the time comes for closing the abdomen, a second layer of sutures is placed to form a valve about the Foley catheter. They are placed transversely from the mesentery border to the Foley catheter on either side as a Lembert suture. It is believed that transverse rather than longitudinal placement of the suture leads to greater patency in the bowel when the tube is removed. The butt end of the catheter is pulled out through the stab wound, the bowel being brought over near to the peritoneum. It is not necessary or advisable to sew the bowel to the peritoneum wall in this area. Indeed in many instances, particularly if the mesentery is short, it is permissible to leave a space of two or three inches between the bowel wall and the peritoneum rather than stretch the bowel to the peritoneal wall. The Foley catheter is connected to a simple gravity drain, and the catheter is irrigated frequently after the first four hours to prevent clogging. It may be secured to the skin by a three-tailed piece of adhesive strapping. The catheter is left in the bowel for at least eight days and preferably ten; then the water bag is emptied and the catheter removed. Leakage from the stab wound is controlled by a dressing, but before it is applied the skin is painted with aluminum paste for protection against the digestive juices.

If the abdomen was greatly distended before operation, considerable time may pass before the motility and secretory ability of the bowel is regained. Hence not much material will drain from the ileostomy tube at first, and it is wise in such circumstances to keep a Levine tube in the stomach attached to suction, mainly for the purpose of keeping nitrogen from entering the bowel through the oral route. With combined gastric suction and ileostomy drainage, the abdomen remains flat until peristalsis returns and the patient can be fed by mouth. Oral feeding may be begun when (1) peristalsis is stethoscopically audible over the abdomen, (2) flatus is passed per rectum, (3) a yellowish rather than black exudate drains from the ileostomy tube, (4) yellow bile is aspirated from the stomach tube, and (5) the patient feels hungry.

Thrombosis in the mesentery does not preclude satisfactory management of the patient with intestinal obstruction, or even management with the method herein described, provided the process is limited. One of the cardinal features of the syndrome of mesentery thrombosis of arterial or venous nature is the intestinal obstruction that results. In some cases, circulatory changes are so severe as to warrant resection of the bowel and anastomosis of the segments. However, even when mesenteric thrombosis is found to be the cause of obstruction, it is considered worthwhile in certain cases to try deflation with a Foley catheter before resorting to resection, for the small intestine is so well supplied with collateral circulation that often there is remarkable return of color to the bowel wall as soon as distention is relieved. If pink color returns and the bowel bleeds when scratched with a knife, it is unlikely resection will be necessary. Decompression ileostomy probably will suffice, care being taken that the tip of the catheter is above the involved area so that deflation of the small intestine continues. Sometimes it may be necessary to insert a second catheter for this purpose.

450 Sutter Street, San Francisco 8.



Routine Cholangiography During Operation For Gallstones

C. C. SMITH, M.D., and GEORGE A. FARIS, M.D., San Jose

• **Cholangiography done routinely during operation was found valuable for detection of stones in the bile ducts. Operation for stone not seen in the operative cholangiogram was seldom necessary.**

When no stone is demonstrated, it seems proper to spare the patient the additional trauma of common duct exploration.

As in many other hospitals, we used to make cholangiograms after the completion of gallbladder operations, injecting the contrast medium through the T tube left in for drainage. In four of 171 such cases in three years, 1952 to 1954, common bile duct stones that had been overlooked at operation were visualized, and reoperation was necessary.

In 1955 and 1956 we began making cholangiograms routinely during operation for gallstones. A mobile x-ray unit rated at 100 milliamperes at 100 kilovolt peak makes practical exposures at a fraction of a second.

In preparing the patient on the operating table, a plywood tunnel is placed under the right side to hold the grid cassette, located between the inferior angle of the scapula and the iliac crest. Nitrous oxide anesthesia avoids explosion hazard.

When the gallbladder has been removed, a polyethylene catheter, size 90, attached to a 10 cc. Luer-Lok syringe is threaded through the stump of the cystic duct past the spiral valves and tied there. Syringe and catheter are filled beforehand with saline solution to avoid introducing air bubbles that could imitate stones in the radiograph. Irrigation to and fro assures that flow is free and that the junction of catheter and duct does not leak.

The syringe is then changed to one holding 20 cc. of sterile 50 per cent Hypaque® or 35 per cent Diodrast® or 35 per cent Urokon®, and to and fro movement of a few cubic centimeters is done again, making sure of a free return of bile without leakage. The syringe is then elevated 2 feet and the common duct filled by gravity, 12 to 14 cc. usually being sufficient.

The x-ray tube is provided with a cone to limit the field to a 10-inch circle. This reduces the exposure of persons in the operating room to an acceptably low level. Immediately after the filling of the bile ducts with contrast medium the film is exposed.

Measurements of radiation about the operating table were made while an abdominal film was exposed. The technical factors were 90 kilovolt peak, 100 milliamperes, 0.3 second, 2 mm. aluminum filter and a 5-inch cone, and 40-inch tube-film distance. The radiation recorded on the right side of the operating table, near the position taken by the surgeon, was 20 to 25 milliroentgens per exposure. Radiation received by the film badge at the head of the table, near anesthetist's position, was approximately 6 milliroentgens per exposure. Thus, from measurements made of scatter radiation, two operative cholangiograms would entail much less than 50 milliroentgens of radiation to the surgeon. This is less than one-half of a week's maximum permissible exposure (100 milliroentgens per week). The anesthetist would receive considerably less radiation than the surgeon.

Film is processed immediately and if appearance suggests a stone in the duct, another exposure is made after irrigation and reinjection of contrast medium. The duct is flushed with saline solution to remove much of the Hypaque before removal of the catheter.

If on opening the abdomen the common duct is obviously inflamed or contains palpable stones, it is usually proper to open it without waiting to do cholangiograms. In such a situation we do the cholangiogram later by introducing the contrast medium through the T tube left in place.

If the gallbladder has already been removed, the injection of Hypaque is made through a needle inserted into the common duct.

REPORTS OF CASES

Following are reports of six cases illustrating various situations in the use of the procedure.

Case 1. The patient was a 72-year-old woman with cholecystitis but no history of jaundice. The

From the Santa Clara County Hospital, San Jose 12.

Presented before the Section on Radiology at the 86th Annual Meeting of the California Medical Association, Los Angeles, April 28 to May 1, 1957.

Revised November 1958.



Figure 1 (Case 1).—Common duct stones demonstrated at operation. A polyethylene catheter was used to fill the bile ducts via the cystic duct stump.



Figure 2 (Case 1).—Cholangiogram made at operation after stones were removed from common duct. The T tube was used for injection.

bile duct was seen to be inflamed and injection of Hypaque was made after removal of the gallbladder. Many small stones were shown in the common duct (Figure 1). These were cleaned out and after the T tube was placed a second injection was made (Figure 2). The patient did well afterward (18 months) although a cholangiogram a few days after operation showed a stone remaining in the hepatic duct.

Case 2. The patient. a 55-year-old man, had had cholecystectomy ten years before. We suspected common duct stone and perhaps pancreatitis. We found the common duct thickened and dilated. It accepted 30 cc. of Urokon by direct injection (Figure 3). The many stones were removed and a T tube cholangiogram showed no stones remaining.



Figure 3 (Case 2).—When the gallbladder has been previously removed, the contrast medium can be directly injected by hypodermic syringe into the bile ducts. Stones are shown in the dilated bile ducts.



Figure 4 (Case 3).—The patient was a 76-year-old man with icterus, cholecystitis and palpable common bile duct stones. The gallbladder was removed, the common duct explored and a T tube placed. The operative cholangiogram showed remaining common duct stones which necessitated reopening of the common duct.

Case 3. A 76-year-old man with mild jaundice was given Telepaque® by mouth but the gallbladder was not visualized. At operation we saw the cystic duct thickened and dilated. and felt a stone far down the common duct. The gallbladder was removed and



Figure 5 (Case 5).—Common bile duct filled with contrast medium after removal of gallbladder. The stone shown above the ampulla was easily palpated by the surgeon. The stone shown in the hepatic duct was not palpated. All stones were removed.

stones were washed out of the common duct. A cholangiogram made immediately after the T tube was placed showed stones still present above the ampulla (Figure 4) and they were removed.

CASE 4. A 23-year-old woman with questionable history of jaundice had many small stones in the gallbladder demonstrated by intravenous Cholografin®, but nothing abnormal as to the common duct. At operation the gallbladder, duodenum and small intestine were observed to be somewhat inflamed. A cholangiogram made by introducing the contrast medium through the cystic duct catheter after removal of the gallbladder showed some small stones in the common duct. The duct was opened and four stones were removed. A postoperative cholangiogram looked good and the patient recovered nicely. Incidentally, there appeared no symptoms of pancreatitis even though contrast medium entered the pancreatic duct.

CASE 5. A 67-year-old man had had intermittent symptoms of biliary obstruction. At operation the gallbladder was found to be small, thick and hard, the bile ducts dilated. A stone blocked the common duct. A cholangiogram after removal of the gallbladder showed a stone just above the ampulla (Figure 5), and a second stone that had not been felt. Both were removed.



Figure 6 (Case 6).—Obstructive jaundice with stones in the gallbladder and common duct. A T tube cholangiogram, made after all known stones were removed, showed a remaining calculus in the left hepatic duct. This stone could not be removed but the recovery of the patient was fairly good.

CASE 6. A 74-year-old man with obstructive jaundice had calcified stones in a nonfunctioning gallbladder. At operation stones could also be felt in the common duct. Cholangiograms that were made after removal of the gallbladder and exploration of the common duct showed a stone remaining in the left hepatic duct (Figure 6). The patient recovered and is known to have remained well for a year, although the stone was shown still in the hepatic duct several days after the operation.

223 Caldwell Avenue, Los Gatos (Smith).

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The Short-Doyle Act

California Community Mental Health Services Program: Background and Status After One Year

ALFRED AUERBACK, *M.D.*, San Francisco

• **The Short-Doyle Act seeks to encourage the treatment of a patient suffering from a psychiatric disorder in his home community, with the assistance of local medical resources. One corollary of this program is the closer working together of the psychiatrist and the rest of the medical profession.**

A second goal of the act is the application of the public health principles to mental illnesses and mental retardation. Educational and consultative services provide implementation of these principles.

In recent years there has been a striking change in attitude regarding the care and treatment of persons with psychiatric disorders. The present concept is that mentally ill persons, instead of being sent to distant state hospitals, should be treated near their homes, close to family and friends, whenever possible. Acting on the theory that inpatient and outpatient psychiatric treatment in the ordinary general hospitals of the community achieves good results in a high proportion of cases, the California legislature has enacted legislation—the Short-Doyle Act—to initiate or expand community mental health services.

When a person becomes ill, whether through heart attack or broken leg, he expects to go to a local general hospital for treatment. It is now believed that most psychiatric illnesses can be treated in a similar setting, that general hospitals should provide facilities for psychiatric care just as they do for surgical and other medical care. It is believed that this would encourage the mentally and emotionally ill to seek help sooner and that faster recovery could be expected.

BACKGROUND

In 1955 the California Department of Mental Hygiene introduced Assembly Bill No. 1159, patterned after similar legislation passed in New York State in 1954. This measure was designed to establish a community mental health services program including outpatient and inpatient care, rehabilitation, education and consultation services. It passed the Assembly but was tabled in Senate committee. A Senate Interim Committee on the Treatment of Mental Illness was set up under Senator Short to study this matter and to bring in recommendations.

The California Medical Association also began a study of this problem. In May, 1956, a special committee was formed, consisting of Dr. Dan O. Kilroy, Chairman of C.M.A. Committee on Legislation, Mr. Howard Hassard, C.M.A. legal counsel, and Dr. Alfred Auerback, chairman of C.M.A. Committee on Mental Health. A letter was sent to nearly 1,000 psychiatrists throughout the state, asking their opinions on the need for a statewide community mental health services program, and requesting suggestions as to how such a program should be organized and financed. Some 250 answers were received, all expressing the need for this program. There were no dissents.

A series of meetings with physicians, psychiatrists and representatives of lay organizations interested in the mental health field gave the committee a clear picture of the unmet mental health needs in California. In the fall of 1956 the committee began to draft a proposed bill. Since the California Conference on Local Health Officers would be meeting jointly with the Department of Mental Hygiene to draft the regulations when the bill was enacted into law, Dr. Ellis D. Sox, Director of Public Health of San Francisco, as president-elect of the conference, was invited to help in its preparation. The proposed draft was reviewed by various interested groups and won acceptance from all. This suggested program was submitted to Senator Short and his committee, who accepted these recommendations in drafting the new bill. Senator Short introduced the measure in the Senate; Assemblyman Doyle simultaneously introduced it in the Assembly.

The Short-Doyle bill as passed by the legislature contained nearly all the recommendations of the C.M.A. The only major loss in its legislative passage was a section providing for state payments to cities or counties for the care of mentally ill patients who were treated locally even though they did not agree to undergo treatment. This section was intended to apply to patients who are so disturbed that they cannot cooperate voluntarily and therefore have to be

Submitted February 16, 1959.

confined, under court order in order to receive necessary treatment. The legislature felt that the program should be voluntary throughout, counties and cities having the right to choose whether or not to enter the program and patients also having free choice in accepting treatment.

PROVISIONS OF THE SHORT-DOYLE ACT

The Short-Doyle Act provides the means by which local governments wishing to establish a local mental health service may do so, with the state matching local funds dollar for dollar. A city or county may receive state reimbursement for 50 per cent of its net expenditures when it establishes at least two of the following services:

1. Three kinds of clinical facilities directly serving patients: (a) Outpatient services in clinics; (b) inpatient services in general hospitals for a period not to exceed 90 days; (c) rehabilitation services in clinics, general hospitals or special centers.

2. Two kinds of services promoting the mental health of the community: (a) Informational and educational services to the public and to the professions and agencies concerned with mental health; (b) mental health consultation for the staffs of schools, public health departments, probation officers, welfare departments and others to help them to deal more effectively with children's or client's mental health problems before they become severe enough to require psychiatric treatment.

Cities and counties may themselves operate these services or they may contract with a private general hospital, clinic, laboratory or other appropriate agency to provide them. Any person who is "unable to obtain private care," whether for financial, geographical or other reasons, is eligible for inpatient or outpatient care and psychiatric rehabilitation. No patient can be forced into treatment (within the provisions of the Short-Doyle Act) against his will or ordered into treatment by a court. Fees shall be charged in accordance with ability to pay, the local community establishing its own financial regulations. Patients who are under court commitment may be treated in the local general hospital but the community receives no state reimbursement for this treatment under the act.

Local Mental Health Authority

Both the option and the authority to establish local mental health services are given to:

1. Any county board of supervisors to establish services covering the entire county;

2. Any city council of a municipality with a population exceeding 50,000;

3. The board of trustees of a health district (applies only to San Joaquin County).

Joint Mental Health Services

Joint mental health services may be established by two or more counties, by two or more cities with a combined population in excess of 50,000, or by a combination of one or more cities with one or more counties. Joint mental health services may be jointly operated, or one participating city or county may contract to provide service for the others. Costs of services are to be apportioned on the basis of population.

Local Mental Health Advisory Board

Each local mental health authority (local governing body) must appoint an advisory board consisting of seven members: Three local physicians in private practice, of whom one shall be a psychiatrist where possible; the chairman of the local governing body; a superior court judge; and two persons "representative of the public interest in mental health."

The local mental health advisory board is given the responsibility to: (a) Review and evaluate the community's mental health needs, services, facilities and special problems; (b) Advise the governing body as to a program of community mental health services and facilities, and, when requested by such governing body, may make recommendations regarding the appointment of a local director of mental health services; (c) After adoption of a program, continue to act in an advisory capacity to the local director of mental health services.

One of three choices is offered to the governing body: The local administrator of mental health services must be a licensed physician and surgeon, but the administrator who is appointed may be either a specially qualified local director of mental health services, the local health officer or the medical administrator of the county hospital. In effect, the governing body has the choice of utilizing one of its two public medical agencies as the administrative setting for the local program of community mental health services, or the governing body may create a new mental health agency under a local director of mental health services.

Items Subject to State Reimbursement

Cities and counties may claim a state reimbursement of 50 per cent of the net amount expended from local funds for the following items:

1. Two or more of the five specific community mental health services authorized by the act (expenditures are subject to reimbursement whether the local governing body operates its services and facilities directly, or provides them through contract "or by other arrangement pursuant to the provisions of this division").

2. "Such inservice training as may be necessary in providing the foregoing services."

3. Salaries of personnel.

4. Approved facilities and services provided through contracts.

5. Operation, maintenance and service costs.

6. Actual and necessary expenses incurred by members of the local mental health advisory board.

7. Expenses incurred by members of the California Conference of local mental health directors for attendance at regular meetings of the conference.

8. "Such other expenditures as may be approved by the director of mental hygiene."

Certain items are specifically excluded by the act from state reimbursement:

1. Treatment services supplied to patients who are able to obtain private care.

2. The cost of confinement "incurred by reason of court procedures"—that is, expenditures for involuntary patients.

3. Inpatient services in excess of 90 days' duration.

4. Services employing a physician who is not a citizen of the United States.

5. Capital improvements.

6. Purchase or construction of buildings.

7. Compensation to members of the local mental health advisory board.

8. "Expenditures for a purpose for which state reimbursement is claimed under any other provision of law" (such as the special services in public schools that receive state aid through the State Department of Education, for example).

PRESENT STATUS

In the first 13 months, December 1, 1957, to December 31, 1958, eleven counties (Alameda, Contra Costa, Kern, Monterey, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Sonoma, Ventura) and one city (San Jose) elected to enter the Short-Doyle program. During this past year these communities spent nearly $2,500,000, receiving almost $1,250,000 in state reimbursement. These communities represent 27.3 per cent of the total state population (4,126,000 persons). Near the end of 1958 the Board of Supervisors of the County of Los Angeles voted to enter the program; hence the counties containing a majority of Californians are now participating in the community mental health services program. As the first year of the Short-Doyle program ended, the boards of supervisors of Fresno and Marin counties voted to appoint mental health advisory boards and the city of Santa Monica voted to enter the program.

In a number of counties, study groups have been organized to explore local mental health needs without actual implementation of the Short-Doyle program. Among these are Solano, Kings, El Dorado, Shasta, Placer, Humboldt-Del Norte, Stanislaus, Tehama, Sacramento and San Benito. The city council of Berkeley has instructed the city manager to include a mental health program in the budget for 1959-60 and will consider it later this year.

In aggregate, the county and city programs now operating under the Short-Doyle Act are providing 42 services, including five inpatient services (146 psychiatric beds), fourteen outpatient clinics, three rehabilitation services and eight educational services. All of them are providing psychiatric consultation services to public agencies. Each community developed the services it required to meet local needs. Some areas focused on children's services, or on inpatient treatment or all-purpose clinics, while others stressed helping patients discharged from state hospitals.

Two pressing problems have appeared with the development of the community mental health service programs. The first is a shortage of trained personnel. There are not enough psychiatrists, psychologists, psychiatric nurses and psychiatric social workers to fill the existing vacancies. As more counties have entered the program the shortage has become more acute. In Monterey County, want of a psychiatric director has prevented operation of a 15-bed psychiatric ward. To meet these personnel shortages the Department of Mental Hygiene held a three-day conference in Berkeley last August, in which all the training institutions in the state participated. These included medical and nursing schools, public and private hospitals, universities and colleges providing education for doctors, nurses and psychiatric personnel. For the next few years the personnel shortages will have to be met through in-service training programs, until these training institutions can begin to provide an increasing number of qualified graduates.

The other pressing problem is that as soon as local services are organized they are overwhelmed by demands for assistance from all quarters. Every clinic has been swamped with referrals. Other community agencies such as the welfare and probation departments, the courts and the schools have sought trained psychiatric help for the many problems confronting them. Because of the heavy demand, every community mental health service has had to establish priorities on the number and the kind of patients that could be accepted for treatment. At the end of January 1959, key personnel of all the existing mental health programs in California met in San Jose to discuss their mutual problems. At this meeting the emphasis was on ways to meet this particular problem and how to provide more psychiatric consultation and guidance to agencies in handling their own

case loads. This group will meet at regular intervals to try to find solutions to the many other problems confronting them.

The California Conference of Local Mental Health Officers was organized in November 1958 with Dr. W. E. Turner of Santa Clara County as its first chairman. This conference, acting jointly with the State Department of Mental Hygiene, evaluates and approves the local mental health programs, and establishes the regulations for their operation.

On July 13, 1957, Dr. Frank A. MacDonald, then president of the California Medical Association, wrote:

"The California Medical Association believes that the Short-Doyle Act (Senate Bill No. 244) which permits psychiatric patients to be treated in general hospitals, which heretofore have infrequently included psychiatric wards, will improve the care of patients with emotional and mental disorders.

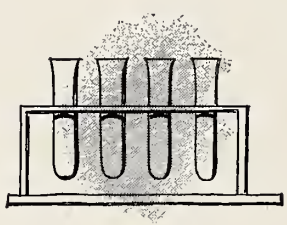
"This act should permit more effective treatment in the early stages of the disorder, should allow closer liaison between various medical specialists and should assist the patient mentally by allowing him to obtain complete psychiatric care in his home community, close to his family, his employment and his personal physician."

Any general hospital wishing to establish an inpatient or outpatient psychiatric service, or to enter a local mental health services program if it already has such services, may do so by entering into a contract with the local governing body. For example, San Francisco county in addition to expanding its county hospital services, plans to contract for psychiatric services with four private general hospitals (Children's, Mt. Zion, St. Mary's and St. Francis Memorial). It has long been recommended that general hospitals should allot up to 10 per cent of their beds for psychiatric patients, including alcoholic patients, and the Short-Doyle Act provides a means for accomplishing this. If such an allotment were made, psychiatrists would be encouraged to join hospital staffs and to participate in hospital activities with a mutual sharing of medical experience. The general hospital would become truly general, capable of caring for patients with illnesses of all kinds, both physical and mental. The hospital would man its psychiatric service the same as the medical, surgical or obstetrical service and would be responsible to the local director of the mental health services only for services contracted for with the community.

All the elements in the programs being carried on under the Short-Doyle Act, both at county and state levels, are developing a closer relationship with the county and state medical societies. The C.M.A. Committee on Mental Health meets at regular intervals with the chairmen of the mental health committees of the county medical societies, with the personnel of the local programs and with representatives of the State Department of Mental Hygiene.

In adopting this program, California has struck out in a bold new attack on mental illness. It is probable that more and more general hospitals will make arrangements for care of psychiatric patients with inpatient, outpatient and rehabilitation services. With both the medical profession and the general public becoming oriented to the newer techniques in psychiatry, earlier diagnosis and treatment can be expected. In the last few years the discharge rate from mental hospitals across the country has exceeded the admission rate and this trend should accelerate in coming years as more treatment is provided in the local community.

450 Sutter Street, San Francisco 8.



Impalement Injuries of the Hand

Repair of Damage from Broken Bean Poles

STANLEY E. MONROE, *M.D.*, Chula Vista

• A not uncommon injury of the hands among agricultural workers is impalement on the sharp ends of tomato-vine or bean-vine stakes that shatter as they are being driven. Careful debridement and tetanus prophylaxis are important in treatment. There are several simple precautions and changes in work methods that could greatly reduce the incidence of such injuries.

INJURIES OF THE HAND caused by impalement on broken stakes happen principally in a few areas where wooden stakes are commonly used as support for tomatoes and pole beans. To drive them, agricultural workers use a tool made from a piece of iron pipe closed at one end and having handles extending along the tube at opposite sides. The top of the stake is inserted into the open end of the pipe, the handles are grasped in the hands and the stake is driven into the ground with a downsweep of the arms.

Injury occurs when a stake breaks and the momentum of the swing carries the worker's hand down upon the jagged end of the piece of the broken stake that is upright in the ground. Nearly all such injuries occur along the radial side of the hand and in a large proportion of them the thenar eminence or a more distal portion of the thumb is damaged. The piece of stake often pierces through soft tissue the full width of the hand, damaging tendons and nerves as well as muscles, but seldom is there fracture of bones. Because of the likelihood of contamination with tetanus organisms, thorough cleansing and careful debridement is essential.

The following case report describing such a hand injury and the method of treatment is typical of some forty similar cases observed in the past few years.

REPORT OF A CASE

A 42-year-old Mexican worker was driving stakes when one of them split and his hand, in downward sweeping, swung down upon the jagged end. A fragment 6 cm. by 1.5 cm., was driven into the left thumb. The entire hand was carefully cleansed with an antibacterial emulsion (Phisohex) and water. Benzalkonium chloride (Zephiran) solution was used to rinse the wound. Lidocaine hydrochloride (Xylocaine) was injected along the tract of the splinter of wood and the tract was then laid open. The large wood fragment and several smaller pieces were removed. A culture was made of material swabbed from the tract made by the splinter. The tract was loosely closed with a single suture and a dry dressing applied.

After a negative reaction to a skin test for hypersensitivity, 10,000 units of tetanus antitoxin was administered intramuscularly and 0.5 cc. of tetanus toxoid subcutaneously. Aspirin-phenacetin-caffein tablets were prescribed for relief of pain. A sling was provided and the patient was advised to avoid using the hand.

On the following day, the wound was dry. There was a moderate amount of dried blood on the dressing. Three days after injury the wound seemed to be healing well. A new dressing was applied on the fourth day and on the sixth day the patient returned to work. A day later the stitch was removed.

The culture of material from the wound grew Gram-negative bacilli, probably pseudomonas, and Gram-positive bacilli resembling hay bacillus.

DISCUSSION

It is believed that injuries of the kind here described could be largely prevented if the following suggestions were carried out:

1. Wearing leather gloves would protect against penetration by some of the smaller fragments of wood.

2. In certain types of soil, holes can be made with a heavy crowbar to permit the introduction of stakes without the use of a driver.

3. If a driver must be used, a metal guard placed as a skirt below the handles of the driver, would protect the worker's hands.

Because of the likelihood of contamination with tetanus spores, careful debridement and large doses of tetanus antitoxin are required (after skin test with diluted material) for patients not actively immunized with tetanus toxoid.

Tissue response to stakes treated with creosote or with other preservatives may differ from the response to untreated wood. In two cases known to the author, large pieces of wood remained imbedded in tissue, with minimal reaction, over a period of weeks. The likelihood of multiple fragments of wood in this kind of injury should be kept in mind.

765 Third Avenue, Chula Vista.

Mediastinal Emphysema

JOHN E. SUMMERS, *M.D.*, Sacramento

• **Mediastinal emphysema may occur due to migration of air from the lungs, from the esophagus or tracheobronchial tree and from the abdomen. Of especial interest is the mechanism starting with the rupture of the perivascular alveoli due to a rapid decrease in intrathoracic pressure from any cause, the development of pulmonary interstitial emphysema and migration of the air into the mediastinum.**

In one case the patient had severe interstitial emphysema of the left lung, mediastinal emphysema and subcutaneous emphysema without pneumothorax and rapid improvement followed tracheotomy.

In another case the patient had interstitial emphysema of the left lung that did not progress to mediastinal emphysema and subcutaneous emphysema. Pneumothorax was not present. Recovery was more rapid than in the first patient.

SINCE IT USUALLY IS CONCOMITANT with pneumothorax or subcutaneous emphysema, mediastinal emphysema rarely gets more than perfunctory attention. The development of severe subcutaneous emphysema without the coexistence of pneumothorax may turn the mind of the observer to conjecture as to the mechanisms by which the condition came about. The occasional occurrence of subcutaneous emphysema during coughing attacks, asthmatic attacks, parturition, operative procedures, bronchoscopy and esophagoscopy, or spontaneously, may perplex the patient and the physician.

In 1944 Macklin and Macklin[8] published a detailed report on "Malignant Interstitial Emphysema of the Lungs and Mediastinum as an Important Occult Complication in Many Respiratory Diseases and Other Conditions." From their studies, both clinical and experimental, they found that a rapid decrease in intrathoracic pressure caused rupture of the perivascular pulmonary alveoli. This permitted the development of interstitial emphysema of the lung and, with migration of the air toward the hilum of the lung, mediastinal emphysema. The air within the interstitial tissues of the lung can also migrate beneath the visceral pleura and form blebs, which may rupture, giving rise to pneumothorax.

The air within the mediastinum may rupture through the mediastinal pleura, causing pneumothorax, it may migrate cephalad, causing subcutaneous emphysema or it may migrate caudad, causing pneumoperitoneum. Air in the anterior mediastinum gives rise to a loud crunching sound, Hamman's sign, with each heart beat.[6]

Clinically, mediastinal emphysema is not ordinarily of much importance because the mediastinal or visceral pleura usually ruptures and the air is released from the mediastinum into the pleural cavity. This was shown very well by the recent work of Webb, Johnston, and Geisler.[14] Experimenting with rabbits and dogs, and with humans at the autopsy table, they introduced air into the mediastinum and observed that the result was first mediastinal emphysema, then movement of the air along the fascial planes to bring about pneumothorax. "At no time were we able to develop a persistent pressure within the normal mediastinum greater than about 5 mm. Hg," they said, concluding that mediastinal emphysema must rarely cause symptoms and that whatever symptoms do occur are probably owing to associated pneumothorax. They also emphasized that the mediastinal emphysema they studied is completely different from that which is a concomitant of interstitial emphysema of the lungs. The pneumothorax is treated by inserting a tube into the pleural cavity and carrying out underwater seal drainage, thus relieving the pressure. If the mediastinal or visceral pleura does not rupture, however, the continued accumulation of air within the mediastinum may cause a high intramediastinal pressure to build up and obstruct the flow of blood from the lungs to the heart. In this situation great relief may result from a cervical incision and tracheotomy.[10,11]

Air may enter the mediastinum in several ways:

1. Any occurrence which can cause rupture of the perivascular pulmonary alveoli—such as coughing, straining at stool or parturition, trauma in an automobile collision—or spontaneous rupture can give rise to interstitial emphysema and its sequelae, mediastinal emphysema and subcutaneous emphysema with or without pneumothorax.

2. Perforation of the trachea, bronchi or esophagus due to foreign body, instrumentation, ulceration or trauma.

3. Operations in the neck, especially in association with tracheotomy or thyroidectomy. The exact mechanism of occurrence of mediastinal emphysema in association with these operations is somewhat controversial.[12] Does the air enter through the incision—that is, is it aspirated from above, or does

Submitted October 10, 1958.



Figure 1 (Case 1).—X-ray films taken on admission to the hospital. *Left:* Film taken after inspiration shows an infiltrate in the left mid-lung field, hyperaeration of the left lung and subcutaneous emphysema. *Center:* Film taken after expiration accentuates the conditions and shows that the left lung does not deflate as well as the right. *Right:* Lateral view shows the presence of mediastinal and subcutaneous emphysema.

it arise as a sequel of rupture of some perivascular pulmonary alveoli? Conditions causing obstruction of the airway frequently produce great respiratory efforts which may rupture the perivascular alveoli and permit the development of interstitial emphysema of the lung and thus mediastinal emphysema.

4. Perforation of a hollow abdominal viscus. Several instances of mediastinal emphysema resulting from a perforated peptic ulcer have been reported.

5. Air may be deliberately introduced into the mediastinum for diagnostic purposes.

6. Pneumomediastinum has occurred during the therapeutic administration of pneumothorax or pneumoperitoneum.

It has been recognized for some time that interstitial emphysema is more common during infancy and childhood.[1] In 1956 Emery,[4] reporting on autopsy of 14 newborn infants who had interstitial emphysema, stated: "The immediate cause of death in all these infants was air in the pleural cavity and mediastinum with apparent compression of the vessels at the roots of the lungs, producing 'air-block.' The interstitial emphysema in all cases appeared to be due to mucus, with amniotic debris and vernix, causing differing degrees of obstruction in the smaller air-passages of the lungs." Berman[2] reported the case of a normal newborn infant in whom progressive respiratory difficulty and cyanosis developed at 18 hours of age. X-ray films of the chest showed a shift of the mediastinum to the right and atelectasis of the right upper lobe, which was interpreted as being due to lobar emphysema or pneumatocele of the left lung. At left thoracotomy done when the infant was 30 hours old, a left marginal pneumothorax and a mediastinum which contained large bubbles of air was observed. No other abnormality was noted. The mediastinum was opened and the patient recovered, being discharged on the eighth postoperative day.

REPORTS OF CASES

Case 1. A 28-month-old white girl was brought to the hospital by her parents on February 11, 1958, because of "swollen head and neck." The patient had had a croupy cough for one week and for two days had had grunting respirations, anorexia, headache and pain in the eyes. When, three days before admittance to hospital, the temperature had risen to 103° F., Terramycin (oxytetracycline), was administered, 125 mg. three times a day. The fever persisted and on the day of admittance a physician had given the child an injection of penicillin. After returning home from the physician's office the parents noted swelling of the child's face and neck and, attributing it to penicillin reaction, took her to the hospital.

The patient had had pneumonia at one year of age and no other illnesses. Two siblings had had upper respiratory infections recently.

Upon physical examination the face was noted to be decidedly swollen due to subcutaneous emphysema, the eye-lids so thickened that they were closed. The neck was greatly swollen due to subcutaneous emphysema, and subcutaneous emphysema was also palpable over the upper part of the chest anteriorly and posteriorly. Breath sounds were loud and harsh over the right lung but absent over the left. No definite rales were heard. Breathing was rapid and shallow. The heart rate was rapid, the rhythm regular. No murmurs were heard.

Upon urinalysis, the reaction for acetone was strongly positive. Hemoglobin content of the blood was 9.0 gm. per 100 cc. Leukocytes numbered 8,100 per cu. mm.—69 per cent polymorphonuclear cells, 30 per cent lymphocytes and 1 per cent monocytes.

X-ray films of the chest were interpreted as showing obstructive emphysema of the left lung with mediastinal and subcutaneous emphysema. Also there was an area of infiltration in the left mid-lung field (Figure 1).

The rectal temperature at the time of admittance was 101° F. Breath sounds could not be heard over the left lung. The roentgenologist considered rupture of the esophagus or bronchus. A small swallow

of barium outlined a normal esophagus. Penicillin, 600,000 units every 12 hours, and tetracycline, 125 mg. four times a day, were administered and the patient was placed in a croup tent.

Next day the swelling of the face, neck and upper chest was more pronounced. Respirations were rapid and labored. Swelling of the subglottic area appeared to obstruct the respirations. X-ray films showed obstructive emphysema of the left lung and an increase in the mediastinal and subcutaneous emphysema.

Obstructive emphysema of the left lung due to a foreign body in the left main stem bronchus with interstitial emphysema of the left lung, mediastinal and subcutaneous emphysema were considered as the probable sequence of events.

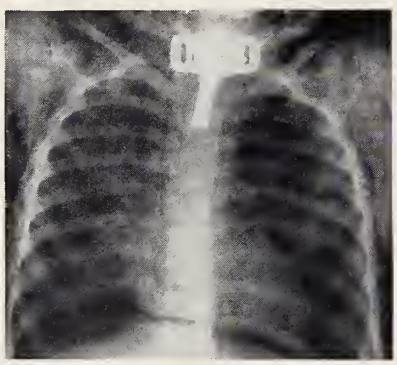


Figure 2 (Case 1). — Film of chest taken after bronchoscopy and tracheotomy shows tube in place, lungs of equal size and the mediastinum in the mid-line.

Accordingly, bronchoscopic examination was performed under general anesthesia. Tracheobronchial aspirate obtained at bronchoscopy was cultured for bacteria and later reported to show no growth. No foreign body was found. Due to the respiratory distress and the severe swelling of the neck caused by the subcutaneous emphysema, tracheotomy was performed. When the transverse cervical incision was made, air gushed out of the tissues, indicating that considerable pressure had accumulated in the mediastinum. A postoperative x-ray film (Figure 2) showed apparent improvement in the lungs.

The temperature rose to 103.3° F. rectally after bronchoscopy.

On the second day in the hospital the rectal temperature declined to 100.8° F. X-ray films showed overdistention and rigidity of the left lung. Breath sounds over the left lung still were absent. The patient was breathing easier through the tracheotomy tube.

On the third day the clinical condition of the patient improved although no change was observed in x-ray films of the chest and breath sounds still were absent over the left lung.

On the seventh hospital day the tracheotomy tube was removed. X-ray films (Figure 3) showed rigidity and overdistention of the left lung. Subcutaneous emphysema was decidedly decreased. On the thirteenth day the patient was clinically well but breath



Figure 3 (Case 1).—Six days after bronchoscopy and after removal of tracheotomy tube. *Left:* Film taken after inspiration shows overdistention and hyperaeration of the left lung. The left mid-lung infiltrate is still present. Note pronounced decrease in subcutaneous emphysema. *Right:* Film taken after expiration shows that the left lung is rigid and does not collapse. There is a shift of the mediastinum to the right.

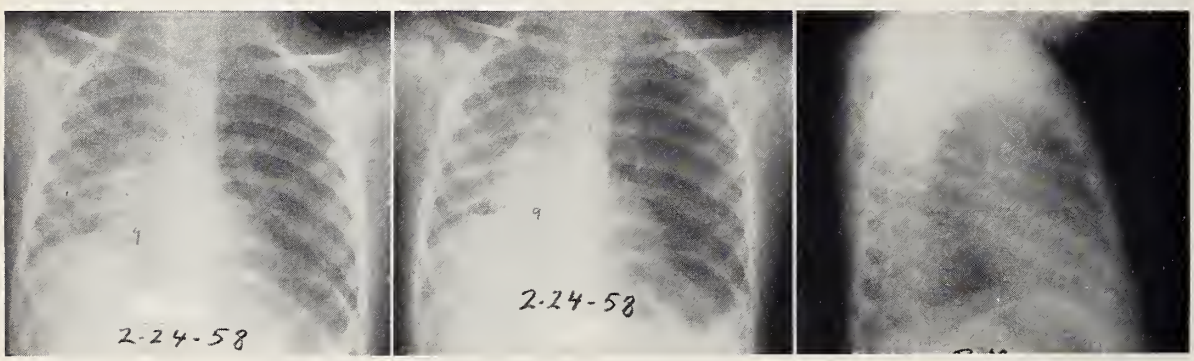


Figure 4 (Case 1).—Films taken twelve days after bronchoscopy. Note complete disappearance of the mediastinal and subcutaneous emphysema. (Breath sounds over the left lung still absent.) *Left:* Film after inspiration shows left lung still slightly hyperaerated and enlarged. *Center:* Film taken after expiration accentuates rigidity of left lung and shift of mediastinum to the right. *Right:* Lateral film shows that the mediastinal and subcutaneous air has now been absorbed.



Figure 5 (Case 1).—Lungs normal 19 days after bronchoscopy. (Breath sounds over the left lung were clearly heard.)



Figure 7 (Case 2).—Film taken on third hospital day shows hyperaeration of the left lung. (Breath sounds over left lung had returned and there was very little mediastinal swing on expiration.)

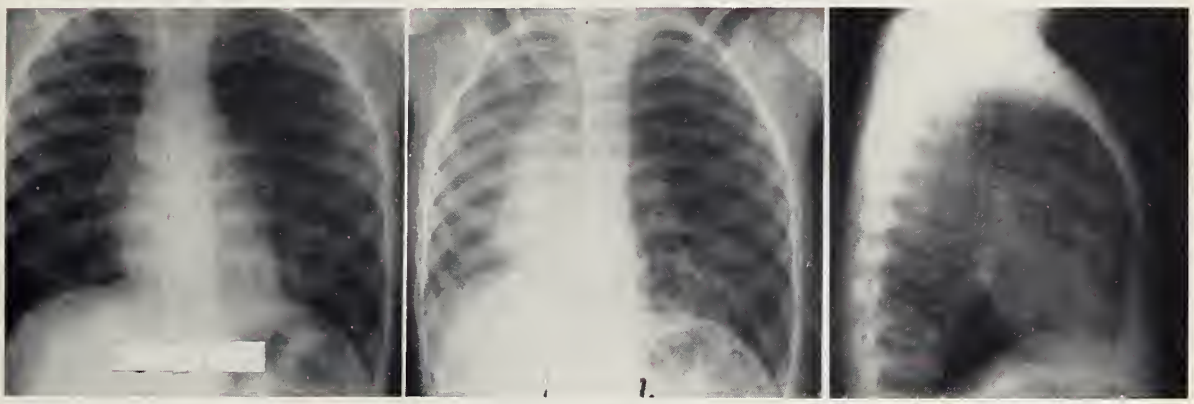


Figure 6 (Case 2).—Films taken on admission show obstructive emphysema of the left lung. (Breath sounds were absent over the left lung.) *Left:* Film taken after inspiration shows some hyperaeration of the left lung. *Center:* Film taken after expiration shows no collapse of left lung and decided swing of the mediastinum to the right. *Right:* Lateral film shows some increase in the anterior-posterior diameter of the chest.

sounds still were absent over the left lung. X-ray films (Figure 4) showed improvement but the left lung was still hyperaerated and did not deflate properly. Not until three weeks after the patient entered the hospital did breath sounds over the left lung become clearly audible. No abnormality was seen in an x-ray film of the chest (Figure 5). Last seen 14 month later, the patient was well and was developing normally. No abnormality was seen in x-ray films of the chest.

Comment. As no definite obstruction of the left main stem bronchus could be demonstrated, it is probable that the sequence of events in this patient was as follows: The severe coughing caused rupture of perivascular alveoli, which permitted the escape of air into the interstitial tissues of the lung, the lung becoming rigid owing to extensive interstitial emphysema, hence not transmitting breath sounds. Then gravitation of air from the left lung along the pulmonary blood vessels toward the hilum of the lung resulted in mediastinal emphysema and then subcutaneous emphysema. Pneumothorax did not occur. Resolution of the subcutaneous and mediastinal emphysema proceeded rapidly but resolution of the pulmonary interstitial emphysema took some time.

Case 2. A 2-year-old slightly underdeveloped white girl was brought to the hospital February 23, 1958, by her foster mother because of chronic cough and loss of weight. About a month and a half previously the child had partially choked while eating almonds. Since then she had had a chronic cough. She had not eaten well and, questioning indicated, may have had some fever. No information as to past history was obtainable.

The patient was small and thin. She was alert and did not seem acutely ill. The pulse rate was 140, respirations 46 per minute and the rectal temperature 100.6° F. Except for absence of breath sounds over the left lung, no abnormalities were noted in the remainder of the physical examination. The hemoglobin content of the blood was 11.8 gm. per 100 cc. Leukocytes numbered 33,800 per cu. mm., 84 per cent polymorphonuclear cells, 8 per cent lymphocytes, 7 per cent monocytes and 1 per cent basophiles.

In x-ray films (Figure 6) of the chest, hyperaeration and rigidity of the left lung were noted. The mediastinum shifted to the right on expiration. These changes were compatible with foreign body obstruction of the left main stem bronchus.

Bronchoscopic examination was performed three days after admittance. No foreign body was seen, but a small amount of mucus was aspirated. Follow-

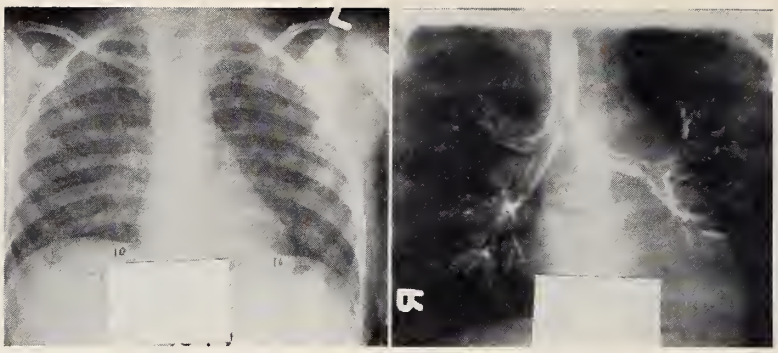


Figure 8 (Case 2).—*Left:* Lungs normal after seven days' hospitalization. (The patient was clinically well.) *Right:* Bronchogram taken on sixteenth hospital day, showing normal tracheobronchial tree.

ing bronchoscopy, breath sounds were heard over the left lung. Considerable improvement in the pulmonary condition was observed in x-ray films. The patient was placed in a croup tent. Penicillin, 600,000 units every 12 hours, and oxytetracycline (Terramycin), 125 mg. four times a day, were administered. From then on the patient was afebrile.

On the fourth hospital day x-ray films showed the left lung was still hyperaerated and did not deflate as well as the right (Figure 7) but breath sounds were heard over it. X-ray films on the sixth day and again on the eighth showed no abnormality either on inspiration or expiration (Figure 8), and breath sounds over both lungs were normal. On the sixteenth hospital day, bronchograms taken with the patient under general anesthesia showed no abnormality. When last seen some two months later, she was progressing normally.

Comment. Here, as in case 1, a child with a severe cough developed evidence of partial obstruction of the left main stem bronchus. The left lung was enlarged and rigid and did not transmit breath sounds. Bronchoscopic examination on the third day of hospitalization did not reveal any definite obstruction of the left main stem bronchus. Although breath sounds were heard over the left lung on the third day of hospitalization, it took about five days for the lung to return to normal roentgenographically. It is assumed that, due to severe coughing, interstitial emphysema of the left lung developed but did not progress to appreciable mediastinal emphysema.

2628 El Camino Avenue, Sacramento 21.

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Hypertrophic Pyloric Stenosis

STEPHEN L. GANS, *M.D.*, Beverly Hills

• **Hypertrophic pyloric stenosis, a relatively common condition, is caused by hyperplasia of the musculature of the pylorus. The diagnosis is made by a history of projectile vomiting and failure to gain weight, the observation of gastric peristaltic waves, and the palpation of a pyloric "tumor." A method of palpating this tumor is described in detail. Roentgenological studies are rarely indicated.**

Pylorotomy for treatment of hypertrophic pyloric stenosis was not successful until the development of necessary supporting measures.

Preparation for operation consists of intravenous administration of fluids and electrolytes and sometimes serum or whole blood. The position of the tumor governs the choice between two different incisions. The operative procedure herein described is essentially that devised by Ramstedt many years ago, with modifications to facilitate the procedure.

ACCURATE DATA on the incidence of congenital hypertrophic pyloric stenosis are not available, but it is probably somewhere between 1 in 200 and 1 in 500 births. It occurs about five times as often in males as in females. More than 50 per cent of patients are first-born children, although only 40 per cent of all children are first-born.[5]

PATHOLOGIC AND ETIOLOGIC FEATURES

The so-called "pyloric tumor" is a firm pale swelling of the pyloric end of the stomach, made up of hypertrophy and perhaps also hyperplasia of the musculature, primarily the circular layer. The blunt distal end projects into the duodenum in the manner of the cervix into the vagina. A longitudinal cut section of the mass has a gray-white, quite avascular appearance and a gristly texture. The mucosa is sometimes quite normal, but frequently edema, congestion or even superficial ulceration is present.

The cause of this relatively common condition remains obscure. It would seem that prolonged pylorospasm with work hypertrophy is the most logical explanation. The spasm could be initiated by the central nervous system, by local abnormal innervation,[8] by local erosions or irritation. Supporting this theory is the fact that the "tumor" disappears after pyloromyotomy but remains after gastroenterostomy. Another phenomenon in accord with the theory is the apparent cure in some cases by nonsurgical methods involving the use of antispasmodics. The theory is weakened, however, by the apparent lack of proof as to what brings about the prolonged pylorospasm. Other factors that cannot be readily fitted to such a postulation are the frequency of familial occurrence[1] and the predominance of the disease in males and in first-born.

DIAGNOSIS

Vomiting is the cardinal symptom. It is caused by obstruction at the plyoric canal, which hypertrophy of the musculature has narrowed. In addition, edema of the mucosa, brought about by prolonged forceful propulsion of gastric contents through the narrowed canal, further reduces the lumen. The time needed for development of these changes is probably why vomiting commonly does not start until the third to the sixth week of life, rarely at birth. At onset, vomiting may simply be mild regurgitation; but it gradually becomes more forceful and then almost always projectile in character. The baby may not vomit every feeding but may retain two or three feedings, then vomit the entire residual. An important point is the eagerness with which the infant will immediately take another feeding soon after vomiting, indicating absence of the nausea that is associated with other causes of infantile vomiting. Because the obstruction is in the pylorus, the vomitus is not bile-stained. The vomitus may occasionally contain a few drops of fresh blood or some "coffee ground" material. In one case observed by the author a tarry stool was passed, probably owing to ulceration of the mucosa.

Other significant information in the history is loss of weight or failure to gain weight. Firmly compacted stools may be noted. In a few cases diarrhea of "starvation type" occurs.

On physical examination the patient usually is observed to be hungry looking, showing signs of dehydration and malnutrition in degrees of severity depending on the duration of the disease. He frequently has a rash around the mouth caused by the irritation of gastric juice. Gastric peristaltic waves may be seen going from left to right across the upper abdomen.

The most important physical finding is the tumor. Palpating it establishes the diagnosis quickly with-

Submitted December 29, 1958.

out need for x-ray study. In all patients observed by the author the mass was palpable. Other investigators have reported similar success.[2,7] Probably it can be done in most cases with patience, perseverance and experienced attention to details. Knowing what to expect to feel is important. Palpated through the abdominal wall, the tumor feels like an olive pit. It cannot be felt unless the infant is completely relaxed, a condition that can be induced by holding a sugar dipped nipple in his mouth. Then, supporting the infant's head and shoulders with the left hand and raising him so that his back is sloped at a 45° angle from the crib mattress in a position that enlists gravity to help bring the tumor into palpable position, the examiner palpates from the right side with the middle three fingers of the right hand.

At first palpation is done lightly, and occasionally the tumor is felt immediately. If not, the examination is conducted more firmly, both through and under the rectus muscle until the entire area is satisfactorily examined. If a mass is felt, it should be pushed away from its location, then felt for again. Palpating it a second time assures the examiner that it is indeed present and that it can only be a pyloric tumor. The tumor is easier to feel after the patient has vomited, but since waiting for him to do so may be inconvenient, a nasogastric tube (a No. 10 or 12 catheter) may be introduced and the stomach emptied if necessary. If the tumor still cannot be palpated, a second or a third examination after lapse of a few minutes may succeed. Failure to detect the tumor by repeated palpation is indication for x-ray study.

Roentgenographic demonstration of the features that are diagnostic of pyloric stenosis is rarely easy and sometimes takes a great deal of perseverance and skill. A dilated stomach, hyperperistalsis and retention of barium are suggestive, but these phenomena may also be present in other conditions. Besides, all these conditions are observable clinically before resorting to x-ray examination. However, demonstrating the narrowed pyloric canal by the "string" sign is considered diagnostic. Sometimes, when the barium enters the duodenum, it will outline the cervix-like protrusion previously mentioned.

Other causes of vomiting in this age group can be differentiated from pyloric stenosis by the absence of a palpable tumor and lack of roentgenographic evidence of pyloric stenosis. In addition, in chalasia of the cardia the persistent cardial relaxation can be demonstrated by x-ray. Pylorospasm, usually intermittent, is relieved by sedatives and antispasmodics. In cases of congenital duodenal obstruction, symptoms are usually present from birth, the vomitus is bile-stained and the x-ray shadows are characteristic. Intracranial conditions, infections and poor feeding methods as causes of infantile vomiting are usually not difficult to identify.

PREOPERATIVE PREPARATION

Pyloromyotomy is not an emergency operation. Adequate time should be taken to prepare the infant for operation. The state of hydration should be studied and chemical contents of the blood evaluated. Some babies with pyloric stenosis retain enough food and are able to compensate sufficiently to keep from losing weight for a short time; and they are ready for operation without further preparation. On the other hand, later in the course of the disease there is metabolic decompensation, and an increasing hypochloremic alkalosis will be found to have developed, as shown by an increased carbon dioxide and decreased chloride in the blood. Replacement should be carried out, using an indwelling intravenous polyethylene catheter in a major peripheral vein.[4] In most instances the amount required for a 24-hour period is 27 to 40 cc. per kg. of body weight (60 to 90 cc. of fluid per pound). Of this total, one-third should be normal saline solution. The problem will be accentuated by catabolic losses of potassium in addition to whatever amount of the ion is lost in the gastric juice. For this reason it may be necessary to add potassium chloride to the solution in the amount of 1 to 2 mEq. per 100 cc. of intravenous fluids when a reasonable urinary output has been noted. It is frequently desirable to add calcium gluconate in amount of 0.5 to 0.75 per kg. of body weight (1 to 2 cc. per pound) to prevent or to treat tetany, because alkalosis causes a decrease of ionized calcium in the blood. If the protein content of the plasma is low, serum is added in amount of 2 to 5 cc. per kg. of body weight (5 to 10 cc. per pound); and if the hemoglobin is low, whole blood is added in the same proportions as serum. The preoperative program should be interrupted and operation performed whenever the infant is in satisfactory condition. It should be altered or prolonged if a satisfactory response is not being obtained. No calculations will take the place of careful clinical observation while replacement is taking place.

OPERATION

For anesthesia the author prefers open-drop ether with plenty of oxygen run in under the mask. Atropine is the only drug used for premedication. Just before the induction of anesthesia, the stomach is emptied carefully with as large a nasogastric tube as can be easily introduced. The tube is left in place during the operation and until the infant is

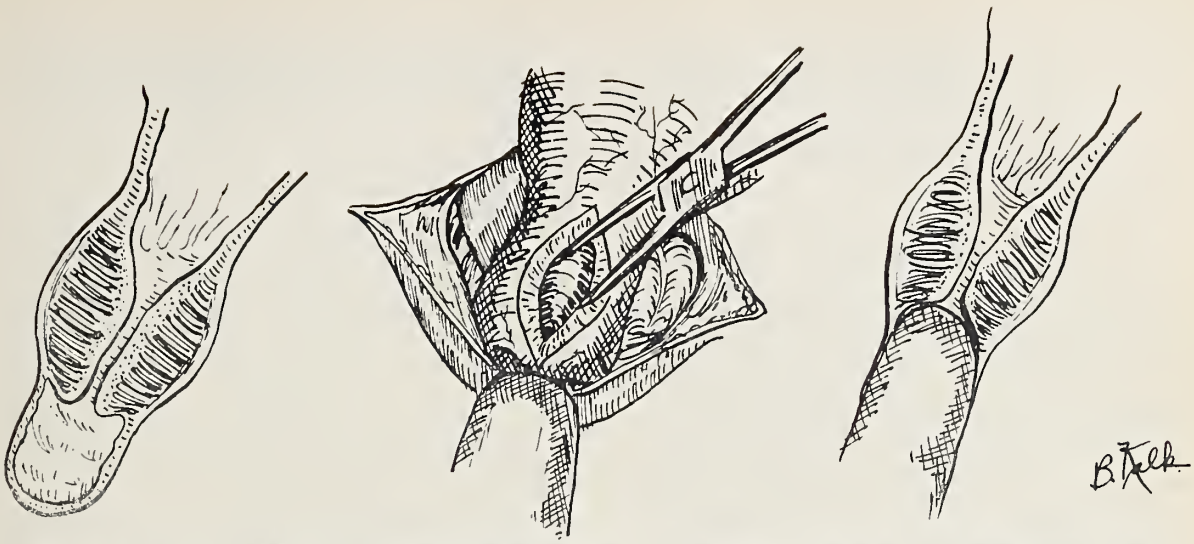


Figure 1.—*Left:* Cross-section of hypertrophied pylorus with cervix-like protrusion of circular muscle. *Center:* Position of finger reducing protrusion while performing pyloromyotomy. Note bulging mucosa. *Right:* Cross-section to diagram the effective reduction, helping to avoid perforation at the dangerous angle.

fully awake from the anesthesia. This will prevent vomiting and aspiration during and after the operation. With the stomach collapsed, delivery of the pylorus into the incision is made easier.

There are two incisions to choose between. If the tumor is palpated in a lateral position, the right upper quadrant gridiron incision serves best. The skin is incised 2 or 3 cm. below the right costal margin and parallel to it. The external oblique and the internal oblique are each spread in the direction of their fibers and retracted. The transversus and peritoneum are opened as one layer and the liver lies immediately beneath. If the "tumor" is in a more medial position, the right rectus muscle splitting incision is used. The skin is incised vertically 2 cm. to the right of the midline, starting just below the costal margin. The anterior fascia is also incised vertically and the rectus muscle spread in the direction of its fibers and retracted. The transversus muscle is usually quite well developed in this region. It too is spread in the direction of its fibers before the peritoneum is incised transversely. With this incision also the liver lies directly beneath; and it is pushed upward with the surgeon's left index finger, while the inferior edge of the wound is retracted by the assistant. A Babcock clamp is passed into the peritoneal cavity by using the back of the left index finger as a guide. It is quite easy to grasp the antrum of the stomach with the clamp and deliver it into the wound. The stomach is held with a moist sponge and so maneuvered as to deliver the pyloric "tumor." Judicious choice of incision permits carrying out this procedure with a minimum of tension on the duodenum.

The tip of the left index finger is then placed against the duodenal end of the pyloric tumor. This, in effect, pushes the protruding muscularis out of the duodenum and helps the surgeon to avoid the dangerous angle (see Figure 1). The tumor is rotated so that the more avascular anterior-superior portion presents, and the antrum is given to the assistant to hold.

An incision is made through the serosa from the pyloroduodenal junction proximally onto the antrum. It is extended somewhat deeper into the muscularis in the center or thicker portion. The muscularis fibers are then spread with a curved hemostat until the mucosa bulges up freely throughout. The most difficult and dangerous area is at the duodenal junction. Here the entire continuity of the ring must be broken without entering the lumen of the duodenum. If such an opening is inadvertently made, it must be repaired and gastric suction maintained for 24 hours after operation. Bubbles of air or bile-stained material may indicate such an opening. If there is any question, the stomach may be inflated with air through the nasogastric tube. The mucosal tear should be sutured with 5-0 chromic or arterial silk and a portion of omentum tacked over the area.

Small bleeding points in the tumor edge are ignored. The ooze is usually due to passive congestion caused by traction of the stomach into the wound. If the pyloric vein itself is divided, it may be sutured a few millimeters away from the edge with 5-0 silk.

When the pylorus is returned to the peritoneal cavity the liver comes down to its position under the incision and offers good protection against

evisceration. The peritoneum and transversus are closed as a single layer with a 3-0 continuous chromic atraumatic suture. The remaining layers are closed with interrupted 4-0 silk and the edges of the skin are approximated with a continuous 5-0 plain subcuticular stitch. A small, light, nonconstricting dressing is applied.

POSTOPERATIVE PROGRAM

There are many regimes of oral feedings for the immediate postoperative period. Most of them serve well, provided certain fundamentals are observed: The infant must not be fed more than he wants, must not be permitted to take too much, must be picked up to be fed, must be "burped" often and thoroughly. The success of postoperative feeding is directly proportional to the nursing staff's attention to the details of care.

Oral feeding may begin when the infant is fully recovered from the anesthesia, usually by four to six hours. He is offered 15 cc. of 5 per cent glucose in water every two hours until three feedings are retained. Then he is offered up to 30 cc. of a 1:5 mixture of evaporated milk and water every two hours until he has retained three feedings. The formula is then gradually increased in amount and concentration so that in 48 to 72 hours he is on a regular feeding regime and is sent home. The avererage time in hospital after the operation is three and a half days. In the first 24 hours, supplementing the diet with parenteral fluids may be desirable, particularly for infants who were in poor condition before operation, or who vomit for a day or two after operation.

The nonsurgical method of management using diet and antispasmodics has been reviewed by Rinvik[10] in the Scandinavian literature. So far as could be determined, the method is not advocated in any of the major centers of this country—for several good reasons. The infant is subjected to from several weeks' to several months' stay in hospital and frequently suffers a severe setback in nutrition, growth and development. The mortality rate is higher than in patients surgically treated. Using the surgical method, hospitalization averages five days, recovery is rapid and the mortality rate almost negligible. The economic aspects are obvious.

9735 Wilshire Boulevard, Beverly Hills.

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A New Simplified Method of Mammaplasty

GEORGE BANKOFF, *M.D.*, Norwalk

• **Abnormally large breasts, which may be a factor in psychic disturbance from an esthetic point of view and which appear to be related to habitual abortion and sterility, can be reduced in size and reshaped by a simpler operative procedure than those now in use. The operation takes considerable less time than others used heretofore. It avoids the need for marking the skin beforehand as a guide to the reshaping procedure and then trying to abide by a preconceived plan, which may be difficult, and it permits the ultimate site of the nipples to be selected after the reshaping is done and even after the skin over the entire breast is completely closed.**

Unlike other plastic operations, interventions on the breast are of fairly recent origin. There are no ancient records which speak of plastic reduction of the female breast. Yet the procedure is sufficiently old—over half a century—to warrant a better understanding and a better method. Several factors have contributed to this situation. Even when fairly good results have been obtained there has been a certain amount of medical opposition to plastic operations on the breast. The misconception still exists that the reduction of oversized breasts leads inevitably to subsequent inability to lactate, although the most inexperienced physician knows that hypertrophied breasts are, as a rule, physiologically functionless. As to the idea that operations on the breast predispose to cancer, this has been disproved by experience. Actually, the reduction of hypertrophied breasts removes certain pathological conditions which otherwise might lead to malignant degeneration of the glandular tissue. Moreover, there still exists a tendency to overlook or completely ignore the esthetic factor, although grossly deformed breasts can cause innumerable mental abnormalities.

In spite of all this, however, able plastic surgeons have tried for years to devise techniques for the reduction of abnormal breasts. Some of these methods achieve fairly good esthetic results, but none can claim perfection.

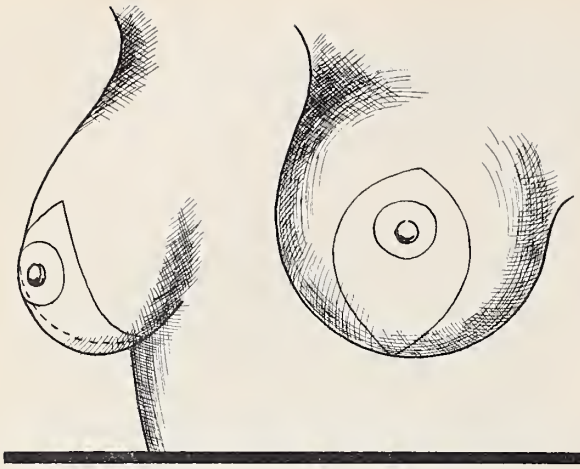
Without attempting a full review of the advantages and disadvantages of the existing methods, it may be helpful to point out briefly some of the principal defects. Some of them aim at producing esthetically perfect breasts, even though this entails sacrificing the physiological function; others try to conceal the inevitable scars, with the result that the shape of the organ suffers; yet again, some methods put so much emphasis on preserving the function that neither is the size adequately reduced nor the scars concealed. In addition, all the procedures are very difficult and long—some take from four to six hours. Another fault common to all the techniques to date is that they employ preliminary markings which are supposed to show in advance the position of the nipple and shape of the reduced breast. Experience shows that it is practically impossible to trace lines which will later on fit exactly to the desired shape and position.

Submitted December 22, 1958.

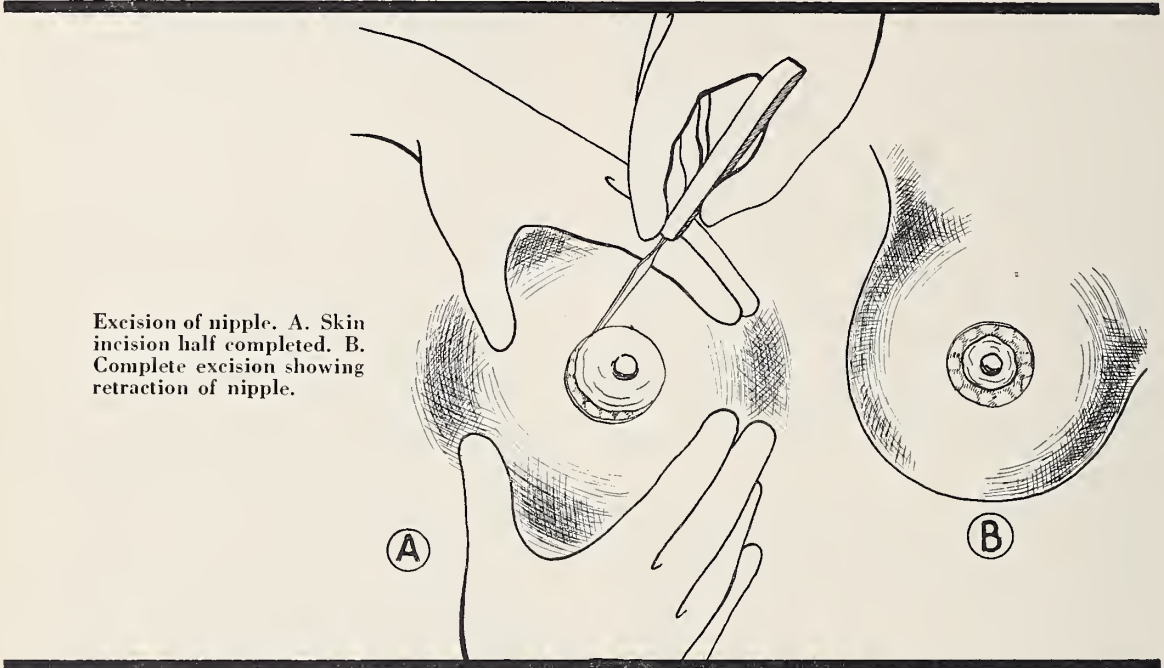
It is obvious, therefore, that the perfect or nearly perfect method would be one that combined the best from all existing techniques while eliminating as far as possible their faults.

In a previous paper[1] I reported observations on a connection between breast hypertrophy and habitual abortion and sterility. And I observed that the plastic reduction of abnormally large breasts prevented abortion and cured sterility in patients who had no other organic abnormality that would cause these conditions.

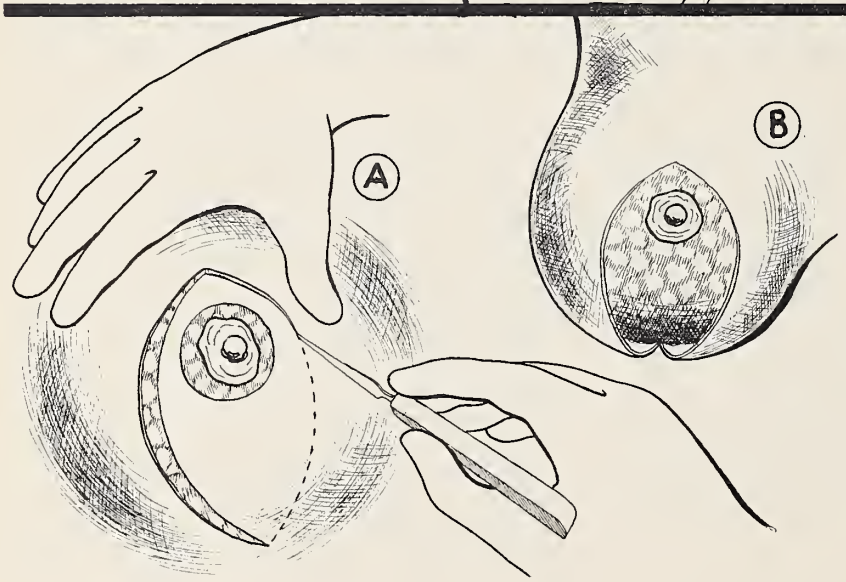
In undertaking the plastic reduction of the hypertrophied gland, consideration had to be given to vital factors. The operation was performed on young women for the principal reason of enabling them to have children. Hence the method adopted had to preserve first of all the function of the gland, at the same time reducing it to about half its original size and giving consideration to esthetic factors. Also, the method had to be simple and take less time than had previously been possible. The technique that was devised to meet these requirements would appear to be a contribution to the advancement of plastic operations on the mammary glands. It is easy to perform even for a general or gynecological surgeon without special training in plastic operations. The technique borrows a good deal, of course, from the work of other surgeons in this field. For the technique here reported, a modified skin incision following the main lines of that devised by Berson is the best; while the S-shape resection of the gland itself originally adopted by Biesenberger, is used for preservation of good blood and nerve supply. Here, however, the similarity



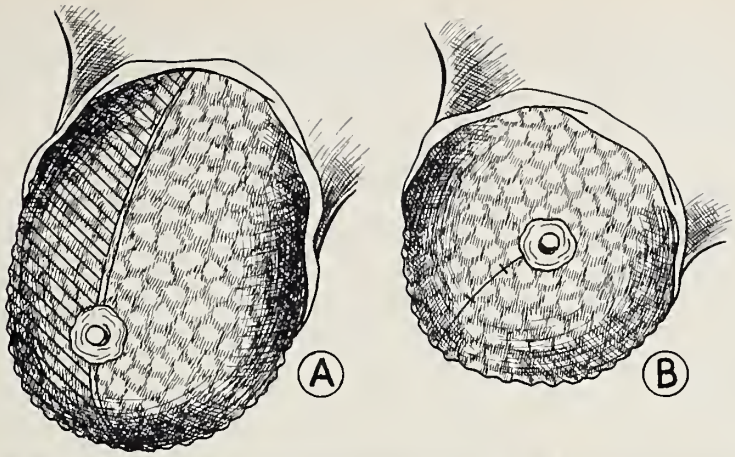
Front and oblique view of the lines of skin incision.



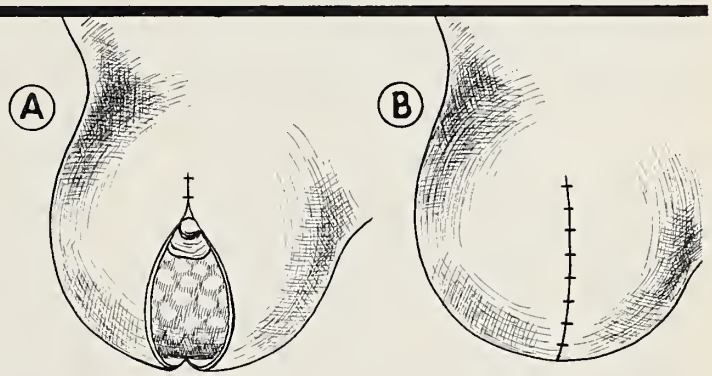
Excision of nipple. A. Skin incision half completed. B. Complete excision showing retraction of nipple.



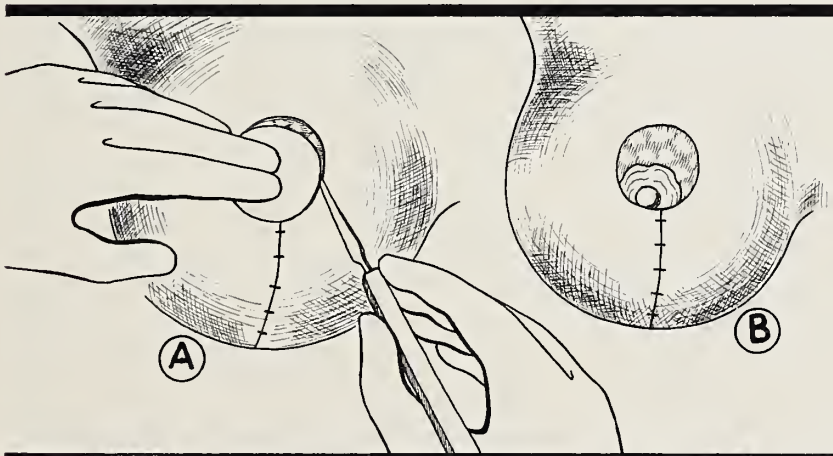
Elliptic incision of skin. A. Skin tightly drawn over breast with incision half completed. B. Skin removed from area within borders of the elliptic incision.



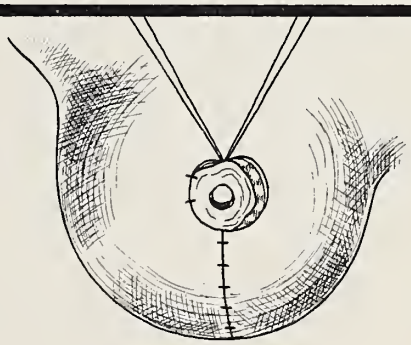
Undermining of the breast. A. Shaded area to he excised. B. Completed reshaped mammary gland.



Suture of skin. A. Placing of interrupted sutures. B. Suture completed with nipple still under skin.



Excision of new areola. A. Excision half completed. B. Nipple showing through the new place of areola.



Suturing of areola in new position.

between my method and those two I have mentioned ceases.

The advantages of the technique are as follows:

It dispenses entirely with all preliminary skin markings which transform the breast into a geometrical puzzle.

It dispenses with the preliminary excision of the new position for the nipple, thus avoiding the inevitable distortions and asymmetry which follow the modeling of the skin upon the reduced gland.

The physiological function of the gland is preserved.

There is only one vertical, or laterally oblique, scar which connects the lower border of the areola to the middle or the lateral third of the submammary sulcus.

An almost perfect natural shape can be obtained and the operation can be performed by a general or gynecological surgeon who has not had training in plastic surgery.

TECHNIQUE

Stage One. After thorough disinfection of the skin, an assistant to the surgeon encircles the nipple with both his hands and retracts the skin tightly and uniformly upon the underlying gland. In this way the areola is stretched to its maximum and the surgeon is able to excise the nipple in a perfect circle, using an ordinary scalpel.

Stage Two. The surgeon draws together the prospective borders of the vertical incision with his two hands, thus forming an opinion of the extent of the skin to be excised. Then an elliptic incision is made, the upper pole of which embraces the excised areola and is at a distance of one to two inches from the skin wound-edge. The lower pole coincides with the mid point or the lateral third of the submammary sulcus. The excess skin is removed with delicate strokes of the scalpel and by blunt separation. The maximum width of the elliptic incision is at the level of the upper third of the space between the nipple and sulcus. With this procedure bleeding is kept to a minimum and no time is lost in ligating bleeding points.

Stage Three. An S-shaped portion from the outer and lower borders of the gland is excised, the amount varying from one-third to two-thirds of the glandular tissue, according to requirements. The portion that is left must include the internal third of the gland to ensure the blood supply of the internal mammary artery. After arresting the slight hemorrhage that occurs, the edges of the reduced gland are brought together by means of interrupted sutures. The nipple is firmly secured onto the reduced organ by interrupted catgut sutures. This will give firm anchorage to ensure blood supply.

Stage Four. The skin is drawn tightly over the gland, the borders overlapping. This makes possible the removal of further strips of skin along the whole circumference of the original incision should that become necessary in the shaping of a perfect breast. No subcutaneous sutures of any kind are applied, interrupted vertical mattress sutures being all that is necessary. Fine silk, silkworm gut, metal clips or any other available material may be used. No attention is paid to the nipple, which at this stage is completely buried beneath the skin. The same performance is repeated on the other breast.

Stage Five. The newly formed breasts are carefully inspected and the new place for the nipples can be easily chosen. For the incision of the skin for the new areolae, one can use a circular piece of metal approximately an inch to an inch and a half in diameter, depending on the size and shape of the breast. After excision of the skin, the buried nipples are easily located and sutured into the new position with interrupted silk stitches. A simple bandage of Elastoplast® is placed on the breasts in such a way as to support and maintain the newly shaped organs. Each breast is bandaged separately in order to facilitate independent inspection and dressing.

The whole operation takes no more than and hour and a half to two hours, instead of the usual four to six hours needed for other methods.

The procedure requires very few instruments. There is no extensive undermining and, as the gland is not traumatized, shock is negligible.

The patient is allowed to get up the day after the operation. On the fifth day, alternate stitches are removed. The remaining sutures are removed on the eighth or tenth day. The patient can usually leave the hospital on the fifth or sixth day—as early as the third day if she wishes to for pecuniary reasons, provided she returns to hospital for removal of stitches and dressings.

Carobil Clinic, 13222 Bloomfield Avenue, Norwalk.

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Medical Preparedness for Disaster

JUSTIN J. STEIN, *M.D.*, Los Angeles

• **The Federal Civil Defense Administration has been consolidated under the President's Reorganization Plan No. 1 of 1958 with the Office of Defense Mobilization. The new organization, the Office of Civil and Defense Mobilization, should be able to deal more efficiently with the problem of mobilization and management of all resources and production of the nation in time of disaster. As preparation for possible enemy attack, organized plans entailing training, supplies, equipment and communications for use in major peacetime disasters—floods, earthquakes, tornado damage —should be carried forward vigorously. Apathy must be overcome. From the local to the highest level all civil defense and disaster plans must be developed and kept flexible enough to be operable during any kind of emergency.**

Physicians must learn as much as they can about the mass care of casualties, how to survive under the most trying of circumstances. Drills in dealing with simulated disaster are of utmost importance for finding out ahead of time what must be done and the personnel and supplies needed for doing it.

Under the President's Reorganization Plan No. 1 of 1958, the Federal Civil Defense Administration and the Office of Defense Mobilization were consolidated on July 1, 1958, to form a new organization in the Executive Office of the President. The new agency is the Office of Civil and Defense Mobilization with Leo A. Hoegh as its director. As Director of OCDM, Mr. Hoegh is a member of the Defense Mobilization Board, and, by statute, of the National Security Council. He regularly attends meetings of the Cabinet at the invitation of the President.

In October of 1958 the Office of Civil and Defense Mobilization outlined the national plan for civil defense and defense mobilization under three major contingencies. These contingencies are international tension, limited war and general war including massive nuclear attack. The plan establishes national nonmilitary courses of action both to deter aggression and for national survival in the event of an attack.

The specific mission of each level of government —federal, state and local—for professional organizations and for the individual citizen are stated in the plan. It is clearly stated that "all citizens and governments at all levels, by virtue of their inherent obligation to support the common defense, are jointly responsible for the civil defense and defense mobilization of the nation.

"The mission of OCDM is

"1. Protection of life and property by preparing for and by carrying out nonmilitary functions to prevent, minimize, repair and recover from injury and damage.

"2. Mobilization and management of resources and production."

There are forty annexes to support the plan, with the National Medical and Health Plan as annex 18.[4]

All plans for major disasters must be flexible. In the short space of 13 years the nominal atomic bomb and multimegaton nuclear bombs have been detonated, the atomic submarine perfected; and in the near future intercontinental ballistic missiles and probably atomic powered aircraft will be ready for use.

It is folly for enlightened peoples to live and plan on the basis that there will be no more wars. The experience gleaned from the study of hundreds of years of history and from the fact that man has changed very little gives convincing evidence that military preparedness is a vital necessity and that wars may occur at any time without warning. Human life does not have the same significance in some areas that it has in the United States. To be less than strong is an open invitation for attack.

Perhaps in the past too much stress has been given to statements that the use of a single megaton hydrogen bomb denotes the destruction of a city, that fantastic numbers of casualties would result from the hydrogen bombing of all the target areas in this country. This may all be quite true, but numerous comments such as these seem to have tended to make the populace, already apathetic on civil defense, more apathetic. Under the best of conditions, civil defense does not have a great deal of popular appeal. The urgent need for organized plans, training, supplies, equipment and communications for use in major disasters should be emphasized because the possibilities of the occurrence of nonmilitary natural disasters, such as floods, earthquakes, plane crashes and train wrecks are ever present in California. The flood in California[1] in December, 1955, was the greatest disaster of its kind that ever occurred in the state. There were 64 deaths attributable to flood conditions, and the financial loss was estimated at $200,000,000 for "direct flood losses" by the California Division of Water Resources.

Presented as part of a Symposium on Medical and Health Services, Region 1 Workshop, San Bernardino, November 19, 1958.
Submitted November 26, 1958.

If local communities are adequately organized, trained and equipped to handle natural disasters, then with additional assistance greater catastrophes can be more adequately managed. The perfection of plans on the federal and state levels has very little value unless the individual on the local level is prepared to play his part. The basic tenets of disaster preparedness are self help and mutual aid.

When one first thinks of a disaster problem such as may occur following a nuclear attack, it seems overwhelming, impossible to cope with. But break the problem down into smaller segments, and especially as it immediately concerns you, and it becomes smaller and the solution appears much simpler. For example, if every individual, or at least one member of every family, should learn first aid, this one objective could help save many lives.

In making medical preparations, it must be assumed that any part of the state at any time is subject to natural disasters of major proportions, with and without warning. Any major disaster may disrupt conditions to such an extent as to make it necessary for the Governor to proclaim a state of disaster or a state of extreme emergency. The state is subject to enemy attack by any or all of the kinds of weapons and methods of delivery available to a potential enemy. Regardless of how well we are prepared and alerted against an enemy attack some of their bomb carrying planes and/or guided missiles, whether released from planes, submarines or fixed installations, will reach the target areas.

From the local to the highest level, civil defense and disaster plans must be developed and kept flexible enough to be operable during an emergency of any type.

The greatest possible use must be made of existing local medical facilities, personnel and equipment. There may be a tendency on the part of some interests to overemphasize their role at the expense of other groups. In the disaster program there is no division that is more important than others—they are all important and their functions and facilities must be coordinated in the overall plan.

The fullest use of paramedical personnel must be made, for they will have to carry the major part of the load. Dentists, veterinarians, nurses with all types of training, dieticians, pharmacists, physiotherapists, medical and x-ray technicians, hospital administrators and many others in the medical field are included under the heading of paramedical personnel.

If we do not have an adequate training program we will not be able to fully utilize these individuals. This also applies to members of the medical profession. Regardless of specialty, all physicians should know the basic principles of disaster medicine. During any great disaster the treatment of mass casualties must be on the same basis as that outlined by the Armed Forces, namely, (1) minimal; (2) immediate; (3) delayed; and (4) expectant. This kind of classification of treatment has to be carried out in order to conserve personnel and supplies and to do the greatest good for the greatest number of persons. A person with a minor injury can be quickly treated and be put back to work, whereas dealing with a person with traumatic abdominal injuries would require the services of many persons and the use of much equipment and materiel. The mass care of casualties must be simplified and standardized as much as possible. Also, the availability of blood and plasma volume-expanders must be stressed.

All personnel must be assigned to specific locations and definite duties, the details to be worked out on the local level. The persons put in charge of triage areas where casualties are sorted should be well trained and have mature medical judgment.

The medical disaster plan must take into account the care of mass casualties from nonmilitary causes as well as those resulting from a nuclear attack and from chemical and biological warfare. The care probably would have to be carried out under conditions of evacuation. Babies will be born, diabetic persons will require insulin, communicable diseases as well as the normal illnesses will be present, and food, clothing and shelter will be required. The rotation of personnel, a system of records and reporting of information for patients and others, the use of utility and mortuary services, blood banks and the coordination of communications and supplies are some of the many things that would present problems during a major disaster. If a disaster occurred from a military attack, from all indications it is quite possible that local areas would have to subsist for as long as two weeks without much direct relief. Certainly, for the first few days little outside help of any type can be anticipated.

The prearranged expansion of existing medical facilities and the utilization of improvised hospitals are of greatest importance. These things cannot be done quickly and effectively without planning and actual testing under simulated disaster conditions.

Many persons have already found out in drills that the 200-bed mobile hospital units now available lack certain equipment which they are supposed to have, that the x-ray films may be worthless, that the generators may not function, and that at least three days is required to make the units functional.

At the recent ninth meeting of the County Medical Societies Civil Defense Conference sponsored by the American Medical Association, it was recommended that a specific study be made of the 200-bed mobile hospital units and how to make them more functional, for they will be called upon heavily in any major disaster.

Short of having a disaster, there is nothing better to stimulate interest in disaster preparedness and to show up existing defects than a good test exercise.

One of the best test exercises ever done in the United States was carried out on June 20, 1958, in Alameda and Contra Costa counties in California on the assumption that a major earthquake had occurred.[2] Some three thousand persons took an active part and all 24 hospitals located in the two-county area, as well as representatives from civil defense and volunteer agencies participated. Within a four-hour period, 2,100 persons with simulated injuries had been collected at a dozen collecting and sorting stations, had been given first aid, loaded into various types of transporting vehicles and delivered to hospitals where definitive medical treatment could be carried out.

It would be a wonderful thing if similar test exercises could be done in strategic areas all over California. Many months of planning and exercises on a smaller scale must be done before an exercise of this magnitude can be successfully undertaken. With stress placed on preparations for nonmilitary disasters, greater public interest can be aroused by using Boy Scouts, high school students and many other segments of the population for special assignments. The use of enthusiastic persons in key positions will do much to lessen the public apathy.

Each hospital, in addition to making a survey of its own facilities, should be fully aware of the number of schools, hotels or other buildings in its vicinity suitable for purposes of expansion or of evacuation of some or all of its patients if need be. Civilians almost invariably think of the hospital as the place to go during or following a disaster. It is quite possible that, in a target area, from 50 to 70 per cent of all existing hospitals and their personnel would be lost following a military attack. One of the requirements of the Joint Committee on Accreditation of Hospitals is that there be adequate hospital disaster planning. "A plan rehearsed at least twice a year, for the reception, care, and evacuation of mass casualties is mandatory for all hospitals."[5]

In the event of a nuclear attack, medical personnel should not expect to have only radiation injury to deal with, for most patients will also have burns, lacerations, penetrating wounds, fractures and the like as a secondary result of the blast. The number and kind of wounds will depend a great deal upon whether the explosion is high in the air, on or near the surface or under water. Most of the patients who have had only radiation injury will not require much medical attention during the first few days but antibiotics, blood transfusions and other measures will have to be resorted to later to combat infection, anemia and hemorrhage.

Medicinal supplies for combating shock, for controlling pain, for the treatment of infection and for dressing wounds must be stockpiled. Provisions must be made for the rotation of drugs which eventually lose their potency. Tetanus antitoxin has an expiration date of three years after its manufacture. Penicillin G tablets remain potent for five years and penicillin for injection is effectual for four or five years after manufacture. Tetracycline, erythromycin and streptomycin in powder form are good for two, three and four years, respectively. One major producer stockpiles insulin for normal use for 24 months, and this two-year supply is maintained, without loss, by replacement with fresh supplies.[6]

The wholesale druggists and the retail pharmacists in this country have on hand for normal use about 45 days' supply of penicillin; the manufacturers have penicillin supplies on hand for nine months' normal demand. It takes from three to four months to produce penicillin. Tetanus toxoid requires about six months to make and distribute, and about four to six months is necessary to make tetanus antitoxin available. That is to say, certain drugs and supplies must be stockpiled at all times if they are to be available in time of grave need.[6]

Federal medical stockpiling has been planned so that numerous small depots will be within a radius of 30 to 100 miles around critical target areas; eventually about 100 warehouses will be available in this country. The warehouses will vary between 8,000 and 20,000 square feet. There are four in California.[7]

Time is precious and we cannot turn the clock back. We must learn as much as we can about the mass care of casualties, about how to survive under the most trying of circumstances. We must know what our own individual responsibilities will be during a major disaster, we must practice the ways to meet them—learn how to use what we have and where it is located.

The price for survival is to be prepared.

University of California Medical Center, Los Angeles 24.

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California MEDICINE

For information on preparation of manuscript, see advertising page 2

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EDITORIAL

Tetanus Immunization

ONE OF THE GREAT SATISFACTIONS in the science of medicine is the development of agents which will eliminate or control a disease entity. Yet too often too many persons delay availing themselves of the use of the agent that is proved to be effective.

Public health reports in California show that the incidence of poliomyelitis in the opening months of 1959 is running about double the number of cases recorded in the same 1958 period. A portion of the same report shows that some 70 per cent of the current victims have not had the Salk vaccine shots which provide a high degree of immunity from the paralyzing forms of the disease.

Here is an agent which has had widespread publicity, professional promotion, public appeals, public fund-raising and all the modern gimmicks which Madison Avenue can supply—and yet a large number of people forego its use.

While Salk vaccine has had the advantage of modern advertising and publicity techniques, an even more effective immunizing agent rests in our hands, in the form of tetanus toxoid. Its use has been well established, its record of effectiveness in preventing tetanus has been proved beyond question and its availability accepted *a priori*.

Elsewhere in this issue there appear two articles on tetanus [see pages 318 and 322], one of them by a public health official describing 232 cases of tetanus recorded in a six-year period. The statistics in this paper point to some important conclusions. Tetanus is no respecter of area, of age or of the site where infection occurs. Tetanus caused death in 47 per cent of all cases listed for this six-year period.

Thirty of California's 58 counties reported tetanus cases in the period reviewed and these covered metropolitan and rural areas, mountainous and valley districts, northern and southern counties.

As to causative factors, the list shows a wide variety. These include punctures, lacerations, abrasions, crushed digits, ulcers, burns, infections, surgical complications, compound fractures, gangrene, bullet or knife wounds and even abortions.

Even where tetanus antitoxin was administered following an injury and before the onset of symptoms, a large proportion of the patients died. One of the two articles in this issue emphasizes the hazards of the use of antitoxin and indicates the nicety of decision that devolves upon a physician contemplating use of the serum in a patient with a "tetanus prone" wound.

The physician is thus left with the cold statistical fact that practically any injury which makes an opening in the skin is to some degree susceptible to tetanus infection. Against the possibility of infection he must weigh the knowledge that the use of antitoxin may cause severe disease in a rather high proportion of cases. If the patient has had previous immunization with toxoid, of course, the decision is a much easier one, but unfortunately few patients can provide information as to whether or not they have had tetanus toxoid in the past or, if they do remember it, few can say when the last booster injection was given.

Although tetanus has not been advertised as an important public problem over the years its deadly character has not diminished. Public health records show that in the period 1920-1924, when California's population was much smaller and when immunization was not yet in wide use, there were 264 cases and the mortality was 82 per cent.

While modern records present a striking improvement over those of some years ago, a mortality rate of 47 per cent today represents a shocking challenge. Fortunately, the challenge is one which can be met successfully.

Although the number of cases of tetanus reported does not loom very large in a state with California's population, the fact that immunization is available for a disease known as a killer should call for sober reflection by all physicians.

Before too long a time, we hope, there may be a crash program to secure tetanus immunization for

all our citizens. When such a campaign is organized, it would have at its command all the publicity techniques which have already been applied to venereal disease and to poliomyelitis. With tetanus, the prognosis of immunization is even more favorable than with these other scourges which have been controlled, if not obliterated, through the combination of effective preventive or therapeutic measures and an aroused public and profession.

Until that day comes, it is the duty of every physician to urge tetanus immunization on his patients, to keep records to show when booster shots are due, to impress patients with the importance of maintaining immunity and of being able to tell any attending physician when he had his most recent booster, and to remain ever alert to the death-dealing character of this disease.

Editorial Comment...

The Future of California Physicians' Service

As California Physicians' Service approaches its majority, its physician members can look back on great accomplishments in the field of health insurance and good public relations. They may feel pleased that C.P.S. still is strongly in the hands of the medical profession, remembering that as individuals they have millions of dollars of time and effort invested in the subsidization of its service plans. But the future they can look forward to is far from certain. For some years now C.P.S. has been upon a plateau of growth and activity. What lies ahead?

This is a day when institutions, organizations, industry, labor unions and government put large amounts of money, long hours of work and effort into applied research which is done under direct supervision or indirectly by financial support of separate research organizations, institutes or universities. Experience has shown that applied research pays. The members of the California Medical Association, through C.P.S. have encouraged and supported practical and applied research in the economic problem of medical care. C.P.S. besides being a fiscal agent of the California Medical Association, can be regarded as the applied research arm of the medical profession of California in this increasingly important field of economics. These efforts of California physicians have paid well in offering positive leadership when it was needed, in gaining practical experience for physicians and others, in health insurance and, early in the life of C.P.S., in effectively halting and since then slowing the progress of socialization of medicine.

To what current problems should our economic researches be turned?

I suggest four important steps to which the physicians of California and C.P.S. should give immediate attention.

1. As rapidly as possible, consistent with sound business principles, base all C.P.S. fee schedules on the Relative Value Study with a dollar base in keeping with the usual fees in a geographic area.

2. We must be prepared through C.P.S. to negotiate, whenever necessary, with federal, state and local government units as well as with industry and labor for the establishment of fee schedules which are based on these principles. These fee schedules may be used by those physicians who choose to do so.

3. We must make medical care plans available for persons over 65 years of age, and we must encourage others to offer hospital care plans that will meet the usual needs of this important and increasingly numerous group of citizens. This action would be in keeping with the recommendations of the House of Delegates of the American Medical Association in December, 1958, and with the actions of the Western New York Blue Shield Plan.

4. We must encourage and develop plans which will cover the medical and hospital needs of those people who desire coverage for catastrophic or major medical illness.

In order to meet the needs of these latter two groups (noted in items No. 3 and No. 4 above) in particular, and in the hope of forestalling government establishment of socialized medicine by little and little, the members of the C.M.A. through C.P.S. must act rapidly and must stand ready again, as individuals to subsidize these plans until the plans can be got on their feet. Sound practice may make it desirable at first to attempt initiating these plans in selected localities for purposes of gaining experience and avoiding excessive and unrealistic contributions by participating physicians. Principles of deductibility and co-insurance and indemnity type plans are very important, but in our race against socialized medicine they may need to be modified or possibly even abandoned.

To maintain some measure of independence in practice, to delay and possibly avoid increasing socialization of medicine and to keep control of the economic factors in the practice of medicine, physicians must again be ready individually to subsidize the applied research arm of the C.M.A., namely C.P.S. They must meet these problems with vision, with unity, with honesty and with determination to succeed.

DWIGHT L. WILBUR, M.D.

Presented before the House of Delegates of the California Medical Association, February 22, 1959.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Transactions of the House of Delegates

San Francisco, February 22-25, 1959

Note: The following report of the transactions of the House of Delegates of the California Medical Association is selected and abridged. A complete transcript of all proceedings is on file in the Association office in San Francisco and available for the inspection of all members.

ELECTION RESULTS

Elections held by the House of Delegates in its final session February 25 brought Doctor Paul D. Foster of Los Angeles to the office of President-Elect of the California Medical Association for the year 1959-1960.

Dr. James C. Doyle was reelected Speaker of the House of Delegates for his fifth term in that office and Dr. Ivan C. Heron was reelected as Vice-Speaker.

In the election of Councilors, who are selected by their own District delegations, Drs. Omer W. Wheeler, Samuel R. Sherman, Ralph C. Teall, Arthur A. Kirchner and Malcolm C. Todd were chosen by their districts to serve additional three-year terms as Councilors. Dr. William F. Quinn was elected to fill the vacancy left by Dr. Foster's selection as President-Elect. Dr. Donald M. Campbell was elected as San Francisco's second council member, and Dr. Byron L. Gifford of Santa Barbara was named by his district to begin a three-year term.

Nine delegates to the American Medical Association were elected, bringing the total of the California delegation to seventeen, equal in size to New York, formerly the largest of the forty-nine (or is it fifty) states. Reelected as A.M.A. delegates were Drs. Henry Gibbons, III, Sam J. McClendon, Eugene F. Hoffman, Frank A. MacDonald, Paul D. Foster and Donald A. Charnock. Elected to their first terms in this office were Drs. Warren L. Bostick, J. B. Price and H. Milton Van Dyke.

As alternate delegates, Drs. Claude P. Callaway, John M. Rumsey, Gerald W. Shaw, J. E. Vaughn, Arthur A. Kirchner and Carl M. Hadley were all reelected. Drs. Francis H. O'Neil, Charles Hudson, Omer W. Wheeler and Samuel R. Sherman were elected to their first terms as alternate delegates.

* * *

REFERENCE COMMITTEES

Committees appointed by Speaker James C. Doyle at the first meeting of the House of Delegates, Sunday morning, April 22, were as follows:

Committee on Credentials: George H. Houck, Palo Alto, chairman. Your Speaker and Vice-Speaker have inaugurated some changes in registration. It was a little bit better, I think, this morning, but there is still room for more improvement.

The Los Angeles delegation subcommittee, E. E.

T. ERIC REYNOLDS, M.D. President
PAUL D. FOSTER, M.D. President-Elect
JAMES C. DOYLE, M.D. Speaker
IVAN C. HERON, M.D. Vice-Speaker
DONALD D. LUM, M.D. . . . Chairman of the Council
SAMUEL R. SHERMAN, M.D. . Vice-Chairman of the Council
MATTHEW N. HOSMER, M.D. Secretary
DWIGHT L. WILBUR, M.D. Editor
HOWARD HASSARD Executive Director
JOHN HUNTON Executive Secretary
General Office, 450 Sutter Street, San Francisca 8
ED CLANCY Director of Public Relations
Southern California Office:
2975 Wilshire Boulevard, Las Angeles 5 • DUnkirk 5-2341

Wadsworth, Jr., James G. Conti, Howard A. Wood, Bruce B. Rolf.

Alameda-Contra Costa to Yuba-Sutter-Colusa. These are two boards combined into one. Walter F. Carpenter, San Diego; Robert S. Leet, Oakland; Gordon C. Hall, Madera; Edward Ryan, Redding.

Reference Committee 1. (The committee reviews the reports of the officers, the Council, the standing and special committees, and the commissions.) Howard E. Clark, Monterey; Fred E. Bradford, Los Angeles; Forrest M. Willett, San Francisco; Willard Newman, San Diego, alternate.

Reference Committee 2. (This committee reviews the reports of the secretary and treasurer and the executive secretary, and studies and makes recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year.) Donald M. Campbell, San Francisco; James J. Morrow, North Hollywood; Robert Dennis, San Jose; L. F. Whittaker, Huntington Beach, alternate.

Reference Committee 3. (This committee considers new and miscellaneous business.) John G. Morrison, San Leandro; Joseph W. Telford, San Diego; Elmer F. Gooel, Beverly Hills; Don C. Musser, San Francisco, alternate.

Reference Committee 3A. (This committee was appointed by your Speaker and Vice-Speaker last year to review and report to the House of Delegates on resolutions pertaining to the public assistance program. The same committee has been reactivated for another year.) Robb Smith, Orange Cove; Robert Combs, San Francisco; William Quinn, Los Angeles; Frederick T. Hunt, Santa Ana, alternate.

Reference Committee 3B. (This committee was appointed by your Speaker and Vice-Speaker to supplement the efforts of Reference Committee 3, which in the past has borne a far heavier burden than it should.) Dorothy M. Allen, Oakland. Charles Grayson, Sacramento; Albert Miller, San Mateo; Harold B. Miles, Santa Barbara.

Reference Committee 4. (This committee considers amendments to the constitution and by-laws.) Roderick A. Ogden, Bakersfield; Roberta Fenlon, San Francisco; August Haschka, Santa Monica; Frank C. Melone, San Bernardino, alternate.

Reference Committee on California Physicians' Service Business: John Mayo, Lodi; Cedric Johnson, Santa Rosa; Ben D. A. Miano, San Bernardino; Wilbur Rogers, Glendale, alternate.

The Constitution Study Committee: This committee was initially appointed in 1957 by your Speaker at the request of the House of Delegates. The Council has suggested that this committee be continued another year. The committee, as originally constituted, is, with your permission, continued. There is one exception: Los Angeles now has one councilor district in place of two formerly. Therefore there is one less on the committee. Sam J. McClendon of San Diego, chairman.

WOMAN'S AUXILIARY

Mrs. Newell Jones, President of the Woman's Auxiliary to the California Medical Association, reported upon the year's activities of that organization, which by following the motto, "Cooperate and Achieve," had successfully completed the work it had outlined for itself for the year.

PRESENTATION OF 50-YEAR AWARDS

Pins commemorative of 50 years of membership in the California Medical Association were presented to the following physicians:

Dr. Lewis Michelson, San Francisco.
Dr. Thomas L. Blanchard, San Jose.
Dr. George P. Hall, Sunnyvale.
Dr. Carl T. Wallace, Eureka.

STUDENT A.M.A. REPRESENTATIVES

The representatives from California medical schools to the Student American Medical Association were introduced:

From the College of Medical Evangelists: Fritz Westerhaup, Jr., and Eugene Shakespeare.

From the University of Southern California: Thomas Hines and Hobart Smith.

From the University of California: Kenneth Drellich and Ann Lawrence.

From Stanford University: Charles E. Comfort and Robert Webster.

SUPPLEMENTAL REPORTS

Vice-Speaker Ivan C. Heron called for supplemental reports beyond those previously made by officers and committee chairmen in the Pre-Convention Bulletin.

REPORT OF LEGAL COUNSEL

MR. HOWARD HASSARD

Mr. Speaker and members of the House of Delegates:

Before presenting to you what I fondly hope will be a brief supplemental report, I think I should acknowledge to you and state very briefly my concepts of the new job I have undertaken.

The first annual session of the California Medical Association that I attended was at the Hotel Del Coronado in May, 1936. I have attended every session since. Whatever little knowledge of the affairs of the California Medical Association that I have been able to pick up during that span, I will do my level best to utilize in the capacity of director. Whatever success comes to me cannot be mine, for I cannot achieve any of it alone. We have a staff that is hard working, dedicated and loyal. We have worked and will work as a team. I am in the position of quarterback. If I call the right signals the team will do the job for you. If I call the wrong signals it's my fault, not the staff's. Our effort will be on the over-all scale, to coordinate, to keep the membership, the officers, the Council, the commissions and committees as informed as possible of the affairs of the association.

You heard Dr. West refer to the growth of the California Medical Association. At the time of the 1936 session that I attended, the California Medical Association membership was approximately 5,000. Twenty-three years later it is in excess of 16,000. No one, I am sure, during the depression days of the thirties had the slightest conception of the growth that actually lay ahead. In fact, in the depression all that was thought about really was survival rather than growth.

Every population study that I have examined with respect to California's future indicates that within the next 20 years the population will at least double. Twenty years from now this association will have over 30,000 members. That may seem like a long time ahead. But 1936 seems like yesterday—and that was 23 years ago.

We must have an organization to serve you that is capable of handling double the number of members that now exists, and we will try to do so.

Now, I will switch to the supplemental report of the Legal Department.

Since the time of the report that was published in the pre-convention bulletin, we have appeared on behalf of the Association in two cases that are now on appeal. They are still pending. They involve subjects of tremendous importance to medicine, and I think I should just outline them to you. One case is entitled Wyatt versus Tahoe Forest District Hospital. The case involves a publicly owned hospital in which the medical staff, organized along the lines recommended by the Joint Commission on Accreditation, recommended to the governing board of the hospital that an applicant for staff privileges be rejected. The governing board accepted that recommendation, whereupon the rejected applicant brought suit.

The case has been tried in a trial court and a decision made in favor of the hospital. It is now on appeal.

The issue involved is whether public ownership of a hospital thwarts the standardization of medical staff organization and thwarts the maintenance of high quality of medical care in a hospital by requiring that any citizen who has a license to practice must be permitted access to the hospital.

As I stated, the case is on appeal and it hasn't been decided yet. It will have considerable bearing when it is decided on the effectiveness of the activities both of the California Medical Association and the California Hospital Association that Dr. West previously outlined to you with regard to maintenance of high quality medical care in the hospitals in this state.

A related case that has been decided in just the past week occurred in Fresno. In that case a physician was expelled from hospital staff membership on recommendation of the credentials committee of the staff after investigation and evaluation. Upon being expelled the physician brought suit, not against the hospital, but against the individual physicians who were members of the committees of the staff that had taken the action and made the recommendation. That case was just decided by the trial court this week in favor of the defendant physicians. The decision ought to have a reassuring effect on the activities of medical staffs in the hospitals in this state.

Another case that is likewise on appeal, the outcome of which will have a tremendous future effect on the practice of medicine, is really a series of cases called the Cutter cases. When the Salk vaccine was first introduced to the public in general in 1955, Cutter Laboratories of Berkeley was one of the manufacturers licensed by the Federal Government to produce Salk vaccine. As I am sure every physician in the room knows, a number of instances of poliomyelitis occurred following inoculation with Salk vaccine manufactured by Cutter. Various of the people who suffered poliomyelitis have brought suit against Cutter Laboratories. One of those cases has been tried in the trial court in Alameda County. The jury found expressly that Cutter Laboratory was not guilty of negligence in any form in the manufacture and distribution of its product, but, on the basis of the instruction of the trial judge, the jury stated that it felt it had no alternative but to find that Cutter Laboratories had been guilty of a breach of an implied warranty, that the law of sales, as applied to products generally, implied a warranty to the effect that when you sell goods those goods are fit for the purpose for which intended. If you buy a tire for your automobile, the law says that the manufacturer of that tire has warranted to you that it's fit to be a tire on your automobile.

The Cutter cases are the first instance in this area, and one of the first instances in the United States, I

should say, of the application of the law of sales to biologicals or prescription pharmaceuticals.

A similar attempt has been made with respect to blood, but the courts have uniformly held that the use of blood is a part of the practice of medicine and is not a sale to the patient of the actual blood that is transfused, even though a charge may be made.

If on appeal the rule that is applicable to blood is applied to biologicals in general, then there will be no implied warranty. If, on the other hand, the court on appeal affirms the trial court, that will mean that in the future all use of biologicals and prescription pharmaceuticals will carry with it a warranty against the unknown, that is, a guarantee that it is fit.

Now, when you stop to consider that in the chain between the manufacturer and the actual use of any biological or prescription pharmaceutical there has to be a physician, I am sure that I need not draw a picture as to the effect to be expected over a period of time if the courts should decide that there is a warranty of fitness for purpose intended in the use of all biologicals and pharmaceuticals.

As stated, the case is on appeal. No one knows what the outcome will be.

Finally, I don't wish to impinge on the report of your legislative chairman, but I thought you would be interested in a bill pending in Congress, HR 4700. You might wish to jot down the number. It was introduced on February 18, 1959, four days ago. The author of it is a gentleman from Rhode Island by the name of Forand. The bill is entitled "A bill to amend the Social Security Act and the Internal Code so as to provide insurance against the cost of hospital, nursing home and surgical service for persons eligible for old age and survivors insurance benefits."

Service is defined as including drugs and such medical care as is generally furnished by hospitals as an essential part of hospital care for bed patients. The term "surgical service" is defined as including all surgical procedures, other than elective surgery, provided in a hospital or in case of emergency or for minor surgery provided in any out-patient department of a hospital or any doctor's offices. Surgical services are further defined as including oral surgery.

I thought you would be interested in that bit of current literature. There are other reports, other resolutions that will come before this House. You will act upon them Wednesday. They deal with many of the facets of this subject, but, as I stated, I thought you might be interested in the present best seller. (Applause)

SUPPLEMENTAL REPORT OF THE COUNCIL

Dr. Donald D. Lum, *Chairman*

Mr. Speaker, members of the House of Delegates:

There is in your folder a report of the Special Committee on Aging [see April, 1959, issue of California Medicine, page 291] to the Council of the California Medical Association.

CONCLUSIONS

1. The C.M.A. should continue to join other organizations in identifying the medical care needs of the 65-plus group in California. C.M.A. should emphasize its belief that these needs can be met on a local level, without federal intervention.

2. There is need for more adequate and up-to-date information.

3. There is need for a continuing study program on the part of the C.M.A. and its component county medical societies.

4. The basic responsibility for meeting the problem of aging lies with the citizens of each community.

5. For those not able to purchase their medical and hospital needs, other solutions have been avaiilable in this state since 1870. Our county and state hospital system has some of the finest physical facilities and equipment available anywhere. Approximately one-third of the hospital days for those 65 and over are provided in county hospitals. Administered on a local level, the county hospitals are most responsive to the needs of the communities they serve. This program is sound and continued to receive the endorsement of C.M.A.

RECOMMENDATIONS

This committee recommends:

1. That C.P.S. be authorized and directed to develop realistic prepayment programs for the aged in California and to report back to the Council. Such programs might contain the following essential features, provided such features are actuarially sound and feasible.

(a) Available to all persons 65 and over on a statewide basis.

(b) Itemizing the cost of professional services and hospitalization (if covered).

(c) Utilize the accepted Blue Shield principles with a realistic income ceiling and a related fee schedule.

(d) Utilize, if practical, a method of co-insurance appropriate for people with modest resources.

(e) Those county medical societies that are willing and able to, should be permitted to participate in this program by exercising local control by use of local claims processing as agents for C.P.S.

Should it be necessary for C.P.S. to request some type of financial guarantee against unusual losses in reference to this particular program, it should make a detailed analysis to the Council about such a proposal. If at all possible, however, such a program should be self-supporting on its own merits.

2. That C.P.S., as the California Blue Shield Plan, cooperate with the National Blue Shield Association program for the aged, to the extent permitted by California conditions.

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BOARD OF TRUSTEES OF C.P.S.

DR. ARLO A. MORRISON, *Chairman*

The major portion of my report has been printed in the Pre-Convention Bulletin. However, I seriously doubt that all members of this House have read that, so I would like to stress just one item: During the past year, due to a thorough going-over of all of our administration of C.P.S., we have been able to effect savings that we feel will result in about half a million dollars per year on our regular program. We also have been able to effect savings which amounted to about $100,000 a year on our Old Age Security program.

Inasmuch as my annual report which was printed in CALIFORNIA MEDICINE was prepared in early November, it is essential that a supplemental report be given on developments which have occured in the planning of a program for persons 65 and over.

In light of the report of your Council and its recommendations for C.P.S. study of plans for the 65 age group, it is a pleasure for me to tell you that substantial progress has already been made toward the development of experimental contracts.

Work in this one area is, of course, in addition to C.P.S. accomplishments of past years through which retired persons have been provided with C.P.S. service benefits. You will recall that as early as 1942 C.P.S. established the Continued Membership Health Plan for retired persons leaving a C.P.S. group. Membership in this plan continues to be available without regard for the age, physical condition or past utilization of benefits by the member.

In 1945 C.P.S. made group benefits available to all employed persons eligible, without respect to age, and then, in 1948, all age limits were withdrawn for dependents.

Prior to instructions from your Council, C.P.S. had been developing contracts specifically designed for persons over age 65. These contracts must at first be considered experimental. We do not know now the precise economic limits to which we may reasonably commit C.P.S. But we cannot become informed if we do not experiment, and we must experiment if we are to offer the public quality health protection at reasonable cost.

Basic principles have already been established in setting forth the benefits covering professional services of such a plan, and, with the further guidance which will come from delegates attending this meeting, we believe that C.P.S. wil be offering for sale a realistic plan for persons 65 and over within a few months.

Therefore, the recommendations included in the Council report which you have just heard and the resolutions which may follow concerning programs for the aged do not come with surprise to C.P.S., but we believe serve to strengthen the position and action thus far taken by the Board of Trustees.

I would like to commend the Los Angeles County Medical Association for honoring us, through its *Bulletin* on our twentieth year. I felt it was a very fine edition and very flattering to C.P.S.

In closing, I feel I would be remiss if I did not thank the members of my board who spent many long hours, both at board meetings and committee meetings, in attempting to solve some of these very complex problems. I especially would like to commend our nonmedical members for their regular attendance and contributions that they have made to C.P.S. over the years. (Applause)

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REPORT OF COMMISSION ON PUBLIC POLICY

DR. DAN O. KILROY

Mr. Speaker, members of the House:

The report of the Commission on Public Policy is divided into the reports of the Committee on Legislation and the Committee on Public Relations. This report is necessarily incomplete at this time inasmuch as an act of the people at the last election revised the method by which the legislature operates. The revision will be explained in some detail later by Mr. Read when he addresses this House. It is that revision which has led to a reduction in the number of bills that have been so far introduced, and yet we still have a large number of bills pertaining to the manner in which you practice medicine. It is our estimate that approximately 10 per cent of all of the bills introduced in the state legislature will affect your practice in one way or another.

I would not attempt at this time to try to discuss all the bills pertaining to medicine which have so far been introduced, but there are nine subjects that I feel merit your consideration and that you should be informed about.

The first is the subject of radiation, and as of last Thursday there were ten bills pertaining to this field. Of these ten, three are of primary interest to you as

physicians. One requires registration and inspection of radiation installations, which reduced down to the most common denominator means that if you have in your office, as is common among many physicians, an x-ray machine, it must be registered and inspected by the Department of Public Health.

Another bill which has the blessing of all doctors, I am sure, is one which will eliminate, by law, the use of x-ray or fluoroscope machines in the fitting of shoes.

The third of interest to you is the creation of a radiation coordinating committee under the office of the governor to study the problems of radiation.

Coroners. AB 1049, which is a bill strongly supported by the California Medical Association, clarifies the legal right of coroners to retain tissues as a part of postmortem study.

Blood alcohol tests. Because a physician drawing blood for a blood alcohol test at the order of a peace officer, but without the consent of the individual involved, may be guilty of assault, legislation has been introduced to remedy this situation.

Public assistance. Pursuant to the request of this House of Delegates made last year to the Council, three bills have been introduced to carry out the Council's desired changes in the medical care program. On this subject I feel you will hear further.

Additionally, two bills have been introduced at this session of the legislature to add needy and disabled as a fourth category of recipients under the medical care program.

You will recall that two years ago a bill was introduced to create an agency of government to study and to control the treatment of cancer. It was popularly known as the cancer quack bill. You will also recall that it was referred on the senate side of the legislature to an interim committee for additional study. The additional study was carried out in the past two years, and at the present time the committee has developed a bill known as SB 194, which creates a cancer advisory council in the Department of Public Health. It provides for regulation and control of methods used in the diagnosis and treatment of cancer.

Air pollution. Senate Bill 314 will create a commission of seven members to study air pollution, to coordinate research and to recommend legislation on this subject.

Disability insurers. This is my one semi-amusing report. The subject is SB 475, which seems to be somewhat confused as to the subject of pregnancy, the authors having defined pregnancy as either an injury or an illness. They don't seem to know which it might be. Therefore, being magnanimous, they are going to provide unemployment payments for the period thereof.

Safety belts. As you recall, last year the House of Delegates passed a resolution pertaining to safety belts and asking for legislation on this subject. In accordance with the request of the House of Delegates a bill has been introduced known as AB 664, which states that any car sold in California after January of 1961 must be equipped with safety belts.

Unemployment insurance. This is important to you as doctor-employers. AB 745 would increase the tax base for unemployment insurance from $3,000 to $3,600, which means you will be paying out more money.

That concludes the report on specific bills.

Mr. Speaker, with your permission I would like at this time to ask Mr. Ben Read, executive secretary of the Public Health League, to report to this House.

MR. READ: Mr. Speaker, members of the House of Delegates:

As Dr. Kilroy stated to you, the legislature is now operating under a new system. Proposition No. 9, adopted at the November election, has done away with the old method of having the February recess. The legislature convened on January 5 and will be there for 160 calendar days, 120 legislative days, or until June 19, in continuous session.

That has posed quite a problem because in the past usually all bills, all major bills, had been introduced by February 1 and we could have them digested, get policy from you and the Council, and know what to do about the bills. This year they are coming in slowly and there is no cut-off period. It's been rather a day-to-day matter of attempting to compile them and see what they do. As of last Thursday night, 2,322 bills had been introduced. In a like period in 1957, over 7,100 bills had been introduced. Now, they still have until June 19 to go, so it will probably reach the 7,000 mark. In past years we always found about 10 per cent of the bills had some reference to subjects in which you might be interested, and we find that to be true this year—still about 10 per cent.

After the legislature convened on January 5, one of the first matters of interest was the appointment of committees which are going to consider bills in which you are interested. We feel very fortunate in the makeup of those committees because they are men who will give your problems a fair hearing. The Assembly Committee on Public Health is chairmanned again by Byron Rumford of Berkeley, whom many of you know. The Senate Public Health Committee is chairmanned by Jack Thompson from Santa Clara, and the Senate Committee on Business and Professions has as its chairman Senator Ed Johnson of Marysville. All of the committee members, I am sure, will give you and your representatives a very courteous hearing.

There is another angle, too, in this new setup in the legislature: Any bill introduced must lie in the committee files for 30 days before it can be considered. As a result, very little actually has been done. As of this date only two bills that might be of concern to you have received any action. One is the technical amendment to the Physical Therapy Act and one is the bill which extends the granting of temporary permits to out-of-state nurses. Those are the only two bills that have any relation to the practice that have had any committee hearings to date.

The future, of course, will probably be full of a lot of problems. They will have to be met, as I said, day to day, and we are compiling, and those of you who are on the *Legislative Bulletin* list will receive, a digest of the bills and Legislative Committee list. If any of you do not receive these bulletins and desire to be on the list, if you will address me at the Senator Hotel in Sacramento, I will be very happy to see that you are placed on the list. That is our best way of getting information to you under this system. We have established an office there in Sacramento with Mr. Salisbury and myself on the job, and due to the fact that we feel the encroachment of third party under the practice of medicine is probably going to come through the insurance field, federal insurance, state health insurance, private insurance, health-welfare fund, so forth, we have recently added a new man to our staff who will specialize in watching the insurance situation. If you wish to be on the mailing list or wish to reach us at any time —the Senator Hotel in Sacramento.

We imagine that many of the old-time bills we had to fight in the past will again be with us. We have been told that Assemblyman Burton from San Francisco will introduce another compulsory state health insurance bill, so we will have to be watching for that.

I think, Mr. Speaker, that is about all that we can report at this time because legislation is still young and we are not able to give you much detail, but call upon us or read the bulletins and try to keep us posted.

DR. KILROY: Mr. Speaker, I ask permission at this time to have Dr. Lafe Ludwig, member of the C.M.A. and the A.M.A. Legislative Committees, report to you on matters of national legislative information.

DR. LUDWIG: Mr. Speaker, members of the House, and guests:

In the 85th Congress we had to follow through something like 706 bills pertaining to medicine.

In the 86th Congress we will have pretty much the same type of bills—some good, some bad—with the exception of some 19 passed in the 85th Congress, 13 of which the American Medical Association supported. I think this is significant, in view of the fact that we are always accused of being a negativistic organization: Some 13 we supported, on two or three we took no position, and a couple we opposed.

There will be numerous categories of bills as we have had in the past. I am only going to mention a few, such as the draft bill, which contains a doctor draft, and which is, as of this moment, passed by the House, not for a two-year extension—the bill expires on the third of June—not for a two-year extension, but for a four-year extension. A letter was sent to the committee by the American Medical Association recommending that if this type of discriminatory legislation should be continued, other professions that were needed from the scientific standpoint should be included in the bill.

No. 2 on the list: The Jenkins-Keogh type of legislation. I think it might be fitting at this time to state that this legislation was initially known as the Reed-Keogh legislation. Congressman Dan Reed, who had been in the Congress for some 41 or 44 years, passed away a week or two ago, and he was one of the originators of this type of legislation. A fine old man. This bill, as you know, passed the House in the 85th Congress. It has passed through the Ways and Means Committee to date. There is no doubt that it will pass the House again. However, in the 85th Congress it reached the Senate Finance Committee, the chairman of which is Senator Harry Byrd, a fine gentleman, and a very conservative and thrifty man. As you know, it was hung up there last time. Frankly, I have not too much enthusiasm that it will get far beyond that. If it does in this session of the Congress, it will be only because of the pressure applied on the committee by individuals through their respective senators, demanding that this bill be put before the Senate. So that if you are in favor of it, and certainly all of you should be, you could write to your congressman and also write your senator, requesting that the Jenkins-Keogh type of legislation be given an opportunity to be heard by the Senate and passed upon by the Senate, pro or con.

The third type of legislation which I think is of great importance is health insurance for government workers. Numerous bills have been introduced covering a group of two million workers plus three million dependents. Numerous types of bills have been introduced, running all the way from the federal government participating from a one-third basis to a two-thirds basis, to paying the entire premium on catastrophic insurance.

We come to the fourth type of legislation. Some of you have certainly seen that the Murray-Dingell bill has been introduced again. Initially it was the Murray-Wagner-Dingell bill. Senator Wagner has

passed away, as Congressman Dingell has. It is his son who is now teaming up on the bill with Senator Murray. Also Mr. Forand, who introduced his bill last Wednesday. Mr. Forand has requested—he is now No. 2 ranking man in the House Ways and Means Committee—that he be appointed chairman of the subcommittee to investigate the needs of the aged. It is our understanding that Congressman Mills, chairman of the committee, would rather do away with the present subcommittees than start more subcommittees.

Also, you may have seen in the Senate the special subcommittee has been appointed. Senator McNamara, former labor leader of Michigan, is chairman of the subcommittee. It is our understanding that this subcommittee following the close of the Congress in the fall will adjourn and will proceed around the country to some 20 cities, holding hearings on the needs of the aged, and having open hearings at that time.

The newly-created committee on legislation, American Medical Association Council on Legislative Activities, is meeting in Washington this Saturday, and it is my understanding that Senator McNamara will be our guest for lunch. Maybe we will learn something; maybe we will not.

In the way of prognostication, as this is not an election year I doubt that very much will happen in Washington legislatively pertaining to us this year. However, the roof may fall in next year, which will be an election year, as you know.

In closing, I am not inclined to be pessimistic, but I do have pessimistic tendencies at times. Those who are working with you and for you on your legislative committees wonder sometimes if it's worth while. We have 40 constituent county societies with a chairman of the legislative committee in each society. We set up two meetings, one in the south of the state and one in the north of the state, last 6th and 7th of November, I believe. The expenses were to be paid by the C.M.A. for the chairman of the legislative committee or representative of the county society, and in the two meetings in Los Angeles and San Francisco we had 16 out of 40 societies represented.

I would also like to call it to your attention that the Public Health League, which is your legislative arm, is neglected considerably by the members of this association. It was brought out today that we had some 17,000 members, and yet only some 9,000 deem it necessary to belong to the Public Health League. If the Public Health League isn't doing the things that you want it to do, that's another point; but it seems to me that it makes it a little difficult for those of us who are trying to carry on your legislative chores for you to have such very weak support.

DR. KILROY: Mr. Speaker, Dr. Malcolm Watts, chairman of the Committee on Public Relations, will give the report of that committee.

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REPORT OF COMMITTEE ON PUBLIC RELATIONS

DR. MALCOLM WATTS

Mr. Speaker and Members of the House of Delegates:

Your Public Relations Committee during the past year has been an active, interested and, we hope, effective group. Its meetings have been attended by the Speaker and the Vice-Speaker of this House, and by the Chairman and Vice-Chairman of the Council. The President and President-Elect have served on the committee. Its discussions have included questions of fundamental policy as well as matters of public relations interest which have arisen from time to time. It has continued and strengthened the grass roots program of basic services which has been developed so effectively by the Public Relations Department through the years.

A major concern of the committee has been to translate the broad objectives which were previously adopted by the House into an action program for public relations for the C.M.A. This was done, and a report approved by the Council was widely distributed throughout the Association. This report was favorably received both within and without the profession. The underlying philosophy of this program is a reaffirmation of the fact that the physician and the medical profession exist only for the best interest of the patient, and that our public relations are simply the expression of this fact, in words and deeds, as individual physicians, as spokesmen for our profession, and as county and state medical associations. What is good for the patient is good public relations—and good public policy. Where this is not recognized the profession is subjected to criticism and rebuke.

Your committee is pleased to report that it has received the enthusiastic support of the President, the President-Elect, and other spokesmen for the C.M.A., both in developing this program and making it an increasingly effective reality during this short year.

Your committee has also given considerable thought and discussion to the wider and deeper applications of this action program. An analysis of many factors which have come to affect the practice of medicine has been required. Some of these factors have been reviewed for you in the committee's monthly column in *Newsletter*.

In substance it is found that the great strength of traditional medical practice lies in the personal rela-

tionship between the physician and his patient in which the physician uses his technological training and human understanding to resolve the patient's individual problem. It is further found that the best relationships of organized medicine with the public are expressions of this same concern with the best interests of the individual, who may be different from other individuals, but who together with other individuals comprises the public. It is noteworthy that the best care for this individual patient is often compromised in circumstances where the principle of greatest good for the greatest number is applied in the distribution of medical care, or where the physician receives his compensation from someone other than his patient. It is difficult, perhaps against human nature, for the "company doctor" or the "union doctor" or the "insurance doctor" to have the same interest in the patient as the personal physician or the specialist who depends upon the patient for his livelihood. These personal, human elements in the best medical practice now find themselves in apparent conflict with some psychological, social, political and economic realities of present-day society. Somehow the needs and characteristics of the human individual and those of human society must be fitted together in such a way that the person who is or may become a patient may continue to receive the best in individual medical care.

It has been said that the public relations of the medical profession consists of everything that is said and done in each doctor's office, of every action or inaction of each medical association and of every public utterance of each physician speaking officially or unofficially. It has been said that good public relations is good performance which is understood and appreciated. If both these statements are true, then good medical public relations consists of good performance by each physician and each medical association which is understood and appreciated.

What is the meaning of "good performance"? The technological care of patients by California physicians and in California hospitals is of high caliber, based on continuing education and continual perfecting of standards. It is equal to the best in the world. But it has become evident that this good technical performance is not enough. The circumstances—psychological, social, economic and political—in which this technical care is rendered are equally important. This has long been recognized by C.M.A., and its pioneering studies in these fields have attracted not only local but national interest. Recently, and unfortunately, the intrinsic worth of one study has been obscured and the public misled by circumstances of premature and sensational reporting. The goals of your committee for the year ahead will be to strengthen this good performance in its broadest concept, make it understood and, we hope, appreciated.

1. Your committee proposes to encourage further consideration of psychological, social and economic factors in medical care, and hopes that the professional objective of better care for patients will be respected by those with special interests.

2. Your committee proposes to focus further upon communication—which is the vehicle of public relations. There are crucial problems in semantics. "Quality of medical care" means one thing to a physician and quite another to a labor leader. There is confusion about "freedom of choice." Who is free to choose? What are his choices? Does it apply before or after one gets sick? The "doctor-patient relationship" and "third party" mean nothing to most of the public. We must learn to speak in terms that will make our meaning clear to others. In addition, we must develop increasingly effective two-way channels for communication with component societies, with the membership of the C.M.A., and with the public. New public relations audiences must be reached.

3. Your committee proposes to develop a closer relationship with the public relations committees of component societies, and to assist them to make good performance, not only a scientific but a social reality in each community, in the sense that it becomes demonstrated, understood and appreciated that the doctor and his medical society are always working for the best interest of the individual who is or may become a patient.

4. Your committee proposes to encourage coordination between it and the other committees and commissions within the C.M.A. structure at state level with the hope that the public relations program of the C.M.A. may be a means whereby their good performance will be better understood and appreciated by the profession, by our patients, and the public.

These then, with your approval, are your PR Committee objectives for the coming year.

ACTION ON RESOLUTIONS

A total of 77 resolutions was introduced before the 1959 House of Delegates, exclusive of proposed amendments to the Constitution and By-Laws and emergency measures. These resolutions are shown here in serial form, together with the action taken on each and, where appropriate, excerpts from pertinent remarks made by the reference committees in bringing the resolutions to the floor for vote.

Several resolutions were withdrawn by their authors. Where this was done, this listing simply shows

the number of the resolution and the fact that it was withdrawn.

Where reference committees combined two or more resolutions into one substitute which was then adopted, the number of the earliest resolution is shown as the one on which action was taken and note made of the numbers of subsequent resolutions which were combined with it; the later resolutions are marked to show that they were combined with an earlier number.

DISSEMINATION OF MEDICAL NEWS

Resolution No. 1.

ACTION: Withdrawn by author.

JUDICIAL COMMISSION

Resolutions No. 2 and No. 55 were combined by the reference committee under a substitute resolution reading as follows:

Resolved: That the proposals contained in Resolutions No. 2 and No. 55 be referred to the Constitution Study Committee for its consideration and for the drafting and introduction of By-Law amendments deemed appropriate by that committee.

ACTION: Adopted by House.

Resolutions No. 2 and No. 55 are shown here for their content.

Resolution No. 2.
Author: Wm. H. Wickett, Jr.
Representing: Orange County Medical Society.

WHEREAS, local county Judicial Councils are, without exception, made up of extremely capable and experienced senior members of local county societies; and

WHEREAS, any hearings on charges of unprofessional conduct are heard by these local Judicial Councils which are well acquainted with the local situation and customs; and

WHEREAS, these hearings are conducted without prejudice and according to specific procedures stipulated by the California Medical Association before an impartial referee; and

WHEREAS, county punitive decisions have been reversed by the California Medical Association Judicial Commission when appealed thereto; now, therefore, be it hereby

Resolved: That the Council of the California Medical Association refer to a special or regular committee to study the functions of the body known as the Judicial Commission, with the purpose of more strongly considering and supporting the opinions of local county Judicial Councils.

Resolution No. 55.
Author: Dudley Bell.
Representing: Eighth District.

WHEREAS, Section 3, Chapter 3, of the By-Laws of the California Medical Association should be amended to provide that the Judicial Commission of the California Medical Association, when hearing appeals by a member from a decision taken by a county medical association Judicial Council against a member, be limited in its consideration to establishing that the proper procedure for disciplinary action has been followed by the county medical association Judicial Council; to the determination that no membership rights or civil rights of the accused have been violated by the county medical association Judicial Council; and to the determination that the accused member has been afforded an adequate opportunity to defend himself against the charges; and

WHEREAS, the above section and chapter should be further amended to provide that the Judicial Commission of the California Medical Association may affirm or reverse the decision of the county medical association Judicial Council on the basis of the above considerations only; but that it may not modify, reduce or increase the penalty imposed upon the member by the county medical association Judicial Council; and

WHEREAS, the above section and chapter should be further amended to provide that, in the event the California Medical Association Judicial Commission reverses the decision of a county medical association Judicial Council on the basis of the above considerations, that the Judicial Council of the county medical association may reinstitute proceedings against the accused member; now, therefore, be it

Resolved: That this proposal be referred to the Constitution Study Committee for its consideration, and for the drafting and introduction of By-Law amendments deemed appropriate by that committee.

SOCIALIZED MEDICINE

Resolution No. 3.
Author: Richard Boylan.
Representing: Riverside County Medical Association.

WHEREAS, it is alleged that socialized medicine in England has produced, among other things, the following results:

1. Increased cost of medicine;

2. Deprived the general practitioner of access to hospitals;

3. Admission to hospitals is delayed sometimes for as much as two years;

4. Produces panels of large size, e.g., 3,600, and

an individual practitioner will see from 90 to 110 patients per day in his office;

5. Encourages symptomatic medicine resulting in a deterioration of both the quality and accuracy of work;

6. Aggravates hypochondriasis;

7. Discourages the student from entering medical school;

8. Results in an undue amount of paper work; and

WHEREAS, there is an increasing tendency toward socialized medicine in the United States and in the several states of the Union through various security programs; and

WHEREAS, there is the same tendency within labor unions to bring about controlled medicine for the benefit of their own large groups of members; and

WHEREAS, there is an increasing tendency on the part of practitioners in America who have, through their several associations pledged themselves not to participate in government programs, do nonetheless participate in those programs; and

WHEREAS, it would be of enormous benefit to every doctor and every association in the United States to understand more fully the causes for socialized medicine in England, as well as the events, personalities and practices which triggered the system into being, and to study those mistakes which were made and might have been avoided in setting up the system which they now have in England; now, therefore, be it

Resolved: That the delegates of the California Medical Association to the American Medical Association be instructed to request the A.M.A. to create, finance and sponsor forthwith a study group which will thoroughly explore the history, causes and results of socialized medicine in England, and that such representatives be professionals in the field of investigating such institutions with the objective of rendering a factual and objective report.

ACTION: Referred to delegates to the A.M.A.

(Comment by Reference Committee No. 3: "Evidence was presented that these data might well have been previously covered by interested committees and commissions and may now be available. . . .")

MEDICAL CARE FOR THE AGED

Resolution No. 4.

Author: William H. Wickett, Jr.

Representing: Orange County Medical Society.

Resolutions No. 44 and No. 54 combined and the following substitute resolution presented by Reference Committee No. 3:

Resolved:

1. That this House instruct the Council of the C.M.A. and C.P.S. to proceed with all speed to develop and actively sell voluntary health plans to further expedite the health care of the aging;

2. That funds from C.M.A. reserves or in the form of additional levies on the membership be used if necessary in promoting this program in its experimental phase;

3. That C.P.S. Trustees also be requested to allocate reserve funds in amounts to be determined for this purpose;

4. That it approves the contract terms that Board of Trustees has adopted as previously stated in this report;

5. That appropriate progress reports be periodically forwarded to the members of the House of Delegates throughout the ensuing year.

ACTION: Adopted by House.

ALTERNATE DELEGATES

Resolution No. 5.

ACTION: Withdrawn by author.

DISTRICTING OF C.M.A.

Resolution No. 6.

Authors: J. B. Price and L. E. Wilson.

Representing: Orange County Medical Society.

WHEREAS, there is a continuing doctor population growth, more marked in certain regions of California than in others; and

WHEREAS, there are many other regional changes such as agricultural areas becoming industrial areas; and

WHEREAS, the Council of the California Medical Association has recently reactivated a special committee to study redistricting of the California Medical Association; now, therefore, be it hereby

Resolved: That the Council of the California Medical Association have the special redistricting committee meet at least twice during 1959, once in the northern area and once in the southern area, at which meetings the individual county medical societies of those areas will be invited to send representatives to discuss their own particular problems relating to districting of the California Medical Association; and be it further

Resolved: That such meetings be held prior to any decisions being made as to the feasibility of adopting the redistricting as outlined in the Heller report.

ACTION: Referred to Constitution Study Committee.

COVERAGE FOR SENIOR PHYSICIANS

Resolution No. 7.
Author: Edgar Wayburn.
Representing: San Francisco Medical Society.

WHEREAS, at the present time there is no provision for senior physicians (over 65) in the medical profession's catastrophic and medical insurance plans; and

WHEREAS, it is desirable and fitting for the medical profession to provide for its senior colleagues; now, therefore, be it

Resolved: That the C.M.A. direct its appropriate committee to investigate inclusion of the senior physicians in such plans.

ACTION: Adopted by House.

UNSCIENTIFIC SURVEYS

Resolution No. 8.
Author: Edgar Wayburn.
Representing: San Francisco Medical Society.

WHEREAS, certain commercial so-called research associations conduct surveys among the medical profession on use of certain products; and

WHEREAS, these surveys consist of small, unscientific samplings which are misleadingly publicized as being accurate, thorough and clinically proven; now, therefore, be it

Resolved: That the C.M.A. go on record as condemning such surveys as being not in the public interest; and be it further

Resolved: That a similar resolution be introduced by the C.M.A. to the A.M.A.

ACTION: Adopted by House.

UNIFORM SYSTEM OF PAYMENT

Resolution No. 9.

ACTION: Not adopted by House.

IDENTIFICATION OF PAYMENT METHOD

Resolution No. 10.

ACTION: Withdrawn by author.

PUBLIC ASSISTANCE PROGRAMS

Resolution No. 11.

ACTION: Withdrawn by author.

DOCTOR-PATIENT RELATIONSHIPS

Resolution No. 12.
Authors: Delegates of First District.
Representing: First C.M.A. District.

WHEREAS, the continued interjection of a third party in the doctor-patient relationship is inevitable; and

WHEREAS, the administrative demands made by such third parties impose an ever-increasing burden on the physician's time, jeopardizing his ability to properly carry out his professional responsibilities to his patients; now, therefore, be it

Resolved: That this House of Delegates establish the policy that a physician's obligations go no further than appropriate medical care; a properly itemized statement of fees; and a single, standard physician's report; and, further, be it

Resolved: That requested additional reports or professional opinions constitute a separate service which the physician may render, at his own discretion, for an appropriate fee.

ACTION: Adopted by House.

DETERMINATION OF THE COST OF PRACTICING MEDICINE

Resolution No. 13.
Authors: Delegates of First District.
Representing: First C.M.A. District.

WHEREAS, the continued interjection of a third party in the doctor-patient relationship is inevitable; and

WHEREAS, these third parties have in the past, of necessity, based their fee schedules on opinion surveys since no effort has been made to obtain a factual knowledge of the actual cost of practicing medicine; now, therefore, be it

Resolved: That this House of Delegates instruct the Council to refer the problem of medical practice cost accounting principles to the proposed Bureau of Research and Planning.

ACTION: Adopted by House. (The "Resolved" portion above was substituted by the reference committee for the original proposal.)

PREPAID HEALTH AND MEDICAL CARE COSTS

Resolution No. 14.
Authors: Delegates of First District.
Representing: First C.M.A. District.

WHEREAS, the cost of prepaid health insurance has increased materially throughout the last several years; and

WHEREAS, in the public mind the cost of medical fees is often loosely blamed as the cause of this increased cost; and

WHEREAS, the bulk of such increased costs are due to increased utilization and cost, particularly of hospital beds and other ancillary services; now, therefore, be it

Resolved: That the California Medical Association shall use whatever means are available to it to accomplish the end that in all health insurance, pre-

paid medical care plans, or other types of health coverage, the cost of professional services shall be clearly designated in the premium charge as separate and distinct from the cost of hospitalization and other ancillary services.

ACTION: Adopted by House.

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INSURANCE REPORT FEES

Resolution No. 15.
Authors: Delegates of First District.
Representing: First C.M.A. District.

WHEREAS, insurance companies in personal injury cases are obtaining the information necessary from the attending physician for the settlement of claims; and

WHEREAS, insurance companies often accomplish this without cost by presenting the injured, who is not their insured, with an insurance form to be completed by the injured's physician; and

WHEREAS, the insurance companies by submission of the request through the injured avoid the liability for payment of an opinion, and many times an expert opinion, necessary in the settlement of the claim; now, therefore, be it

Resolved: That the House of Delegates endorse the principle of an equitable fee for the preparation of these reports to permit the Committee on Fees to include this item in the Relative Value Study or by any other method of implementation within the California Medical Association structure.

ACTION: Adopted by House.

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SOCIAL SECURITY COVERAGE FOR PHYSICIANS

Resolution No. 16.
Author: John B. Hamilton.
Representing: Los Angeles County Delegate.

Resolutions No. 34 and No. 41 were combined with Resolution No. 16 by the reference committee and a substitute resolution presented to the House, as follows:

WHEREAS, Social Security coverage for physicians is controversial; and

WHEREAS, legally elected officers and delegates are desirous of informed educated opinion from their constituents; and

WHEREAS, these matters are most equitably handled on a local rather than statewide basis; now, therefore, be it

Resolved: That—

1. Each county society institute an educational program with a poll of its membership re social security coverage, the format of which should be submitted by the Council to each individual society in the interest of uniformity; and

2. That the Speaker appoint a special committee of the House of Delegates composed of proponents and opponents of this subject, whose duties shall be (a) the development of the format for a standard poll on social security for the State of California; (b) that this committee secure the consultation of the C.M.A. Council in the formation of this format; and (c) that the committee make this material available to the component county medical societies for their use.

ACTION: Adopted by House.

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PROPOSED LEGISLATION RE TUBERCULOSIS TESTS FOR SCHOOL EMPLOYEES

Resolution No. 17.
Author: Edgar F. Mauer.
Representing: L.A.C.M.A. delegation.

WHEREAS, it is in the public interest to require school teachers to have regular chest x-rays as a public health measure to prevent the spread of this disease among school children, and by them to others; and

WHEREAS, conflicting interpretations of existing state law have confused school boards, teachers, and others in what their responsibilities are in this important matter; therefore, be it

Resolved: That an appropriate amendment to the Educational Code of the State of California be introduced at the current meeting of the State Legislature. Such amendment shall require without exemption that all employees of any school district undergo an examination to determine that they are free of active tuberculosis. Such examination shall be conducted by a physician and surgeon licensed by the State of California, and shall consist of an x-ray of the lungs, or an approved tuberculin skin test which, if positive, shall be followed by an x-ray of the chest.

Pending passage of such legislation, all school districts should be urged to follow this procedure.

ACTION: Adopted by House. (Minor amendment in language proposed by reference committee and approved.)

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PUBLIC RELATIONS ORGANIZATION FOR PRIVATE MEDICINE VS. GOVERNMENT MEDICINE

Resolution No. 18.
Author: Douglas Donath.
Representing: L.A.C.M.A. delegation.

WHEREAS, progressive encroachment upon the private practice of medicine is taking place in spite of current efforts to preserve it; and

WHEREAS, very little effective information to and education of the public has been accomplished relating to the excellent quality and availability of American medicine as compared with that in socialized states; and

WHEREAS, the most effective appeal to legislators is through their constituents at the so-called "grass roots" level; and

WHEREAS, a real emergency exists as a threat to the private practice of medicine being destroyed, as illustrated by the recent political action taken in the State of California and elsewhere, together with the predicted legislation to be passed soon at the national level; and

WHEREAS, the most effective means must be used to reach the public and legislators without delay; and

WHEREAS, every effort must be brought to bear to encourage the passage of legislation favorable to the preservation of the private practice of medicine without government influence or domination, and to prevent the passage of legislation which encourages government participation or control of medicine; and

WHEREAS, the cost of such a program would involve considerable expenditure of funds; therefore, be it

Resolved: That—

1. The Council of the C.M.A. be charged with the duty to obtain without delay, the services of a public relations organization of recognized ability and standing, whose duties shall be:

(a) To educate the public as to the benefits the public derives from the excellence of private medicine in the United States of America as compared to government medicine elsewhere;

(b) To create "grass roots" interest and appreciation for private medicine;

(c) To encourage the passage of legislation favorable to the private practice of medicine;

(d) To discourage the passage of legislation which favors government influence, domination or control of medicine.

2. The Council of the C.M.A. be given endorsement to levy a reasonable assessment on its membership to finance the program if available funds are insufficient;

3. The delegates to the A.M.A. from California be instructed to introduce and make every possible effort to insure passage of a similar resolution at the next meeting of the A.M.A.

ACTION: Referred to Commision on Public Policy for consideration and report to the Council.

C.M.A. RELATIVE VALUE STUDY PAMPHLET

Resolution No. 19.
Author: Douglas Donath.
Representing: L.A.C.M.A. delegation.

WHEREAS, the C.M.A. Relative Value Study pamphlet is a relative study of fees as stated, and in no way represents a fixed fee schedule; therefore be it

Resolved: That the C.M.A. reaffirm its position that the Relative Value Study pamphlet cannot be used as a fixed fee schedule; and, further, be it

Resolved: That this principle be always clearly and explicitly incorporated into the "Foreword and Preface" of the C.M.A. Relative Value Study pamphlet.

ACTION: Adopted by House.

FREE CHOICE OF PHYSICIAN

Resolution No. 20.

ACTION: Withdrawn by author.

HEALTH INSURANCE TERMS

Resolution No. 21.
Author: John M. Rumsey.
Representing: San Diego County Medical Society.

WHEREAS, the so-called "medical while hospitalized" type of insurance has resulted in increased pressure on doctors for hospitalization by patients; and

WHEREAS, it seems to us that this creates an "attractive nuisance"; and

WHEREAS, this "attractive nuisance" stimulates the hospitalization of patients for procedures which could more economically be done in the office; now, therefore, be it

Resolved: That the California Medical Association use whatever means it can to stimulate the writing of insurance so that the procedure or disease is specifically noted, rather than the place—that is, hospital or office where this is cared for or done—as the basis for coverage.

ACTION: Adopted by House.

FOREIGN GRADUATES

Resolution No. 22.

ACTION: Withdrawn by author.

NEW C.P.S. COVERAGE

Resolution No. 23.
Author: Samuel Hurwitz.
Representing: San Francisco Medical Society.

WHEREAS, C.P.S. has recently made available benefits for the newborn and premature infant; and

WHEREAS, this fills a long standing need and should prove valuable to both physicians and patients; now, therefore, be it

Resolved: That the House of Delegates of the California Medical Association commend C.P.S. for this forward step and instruct it to give the widest possible publicity to these benefits so that subscribing members will be encouraged to obtain this coverage.

ACTION: Adopted by House.

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A.M.A. COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

Resolution No. 24.
Author: A. B. Sirbu.
Representing: San Francisco Medical Society.

WHEREAS, the A.M.A. Council on Medical Education and Hospitals is designed to aid, increase and encourage the opportunity for better medical education, rather than hinder its development by punitive measures; and

WHEREAS, under the existing method of hospital intern training program approval the report of one individual to a subcommittee of the A.M.A. Council on Medical Education and Hospitals can determine the approval or rejection of a hospital training program; and

WHEREAS, unlike the Commission on Accreditation of Hospitals, under the existing structure of the A.M.A. Council on Medical Education and Hospitals there is no mechanism for appeal by a hospital staff from what could be an arbitrary or even erroneous evaluation by a single individual; and

WHEREAS, abrupt withdrawal of approval of training programs has been disruptive and harmful; and

WHEREAS, in 1956 and 1957 the C.M.A. was presented with resolutions suggesting revisions in the approval methods of the Council on Medical Education; and

WHEREAS, this body went on record as approving these revisions and there has been no evidence of change through the Council on Medical Education and Hospitals; now, therefore, be it

Resolved: That the C.M.A. House of Delegates instruct our delegates to the A.M.A. and also notify the component societies of California and other states that the following be implemented:

1. When a hospital training program has received a recommendation of disapproval from an A.M.A. Council inspector that hospital shall be given written notification of the deficiencies prior to definitive action on the report by the A.M.A. Council on Medical Education and Hospitals.

2. The inspected hospital if it so desires shall be granted a prescribed time to prepare a rebuttal to the report of the inspector. This report, together with the inspector's shall be considered by a regional committee which, where indicated, shall make a personal investigation of the facts. The regional committee shall then send its own recommendation to the Council on Medical Education and Hospitals.

3. That minimum standards in *Essentials of an Approved Internship* last published in 1955 be carefully reviewed and adequately clarified so that each hospital may find a detailed and lucid description of minimum requirements for approval.

ACTION: Adopted by House.

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HEALTH INSURANCE PLANS

Resolution No. 25.

ACTION: Withdrawn by author.

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PUBLIC ASSISTANCE FEE SCHEDULE

Resolution No. 26.
Author: Emmet Rixford.
Representing: San Francisco Medical Society.

WHEREAS, changes in the present fee schedule of the Public Assistance program are inevitable: now, therefore, be it

Resolved: That in negotiations for revision of the Public Assistance program fee schedules the most recent relative value study be used and the current factor for the average income group be considered.

ACTION: Adopted by House.

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COMMISSION ON PERSONAL INJURIES

Resolution No. 27.
Author: Charles A. Noble.
Representing: San Francisco Medical Society.

WHEREAS, the C.M.A. House of Delegates in the past has been interested in plans for an impartial state administered commission on personal injuries; and

WHEREAS, Governor Edmund G. Brown has announced his interest in an impartial commission similar to the Industrial Accident Commission for use in all automobile personal injury cases; now, therefore, be it

Resolved: That this House of Delegates reaffirm its interest in the principle of such commissions for the administration of impartial justice to the injured citizen and refer this to the C.M.A. Council for imdiate investigation and action; and be it further

Resolved: That the Governor be informed of the C.M.A.'s action.

ACTION: Adopted by House.

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AIR POLLUTION

Resolution No. 28.
Author: Grace M. Talbott.
Representing: San Francisco Medical Society.

WHEREAS, evidence is accumulating that air pollution, including both radioactive and nonradioactive contaminants, is detrimental to the health and welfare of the people of California; and

WHEREAS, this is a problem which is increasing progressively in magnitude throughout the state; and

WHEREAS, the medical profession is vitally concerned with such problems; now, therefore, be it

Resolved: That the C.M.A. include in its Commission on Public Health and Public Agencies a committee on air pollution to consist of physicians who are authorities in this field, the functions of said committee to include stimulation of and sponsorship of research in all phases of atmospheric contamination in our state; and be it further

Resolved: That the C.M.A. should offer the services of this committee to the State of California and all its counties, municipalities, and other public agencies.

ACTION: Adopted by House.

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EXFOLIATIVE CYTOLOGY

Resolution No. 29.
Author: T. D. Englehorn.
Representing: Monterey County Medical Society.

WHEREAS, exfoliative cytology is a phase of pathologic histology and as such constitutes a portion of the practice of medicine; and

WHEREAS, interpretation of exfoliative cytology smears is a medical consultation which is or should be performed by a qualified Doctor of Medicine for a second Doctor of Medicine; and

WHEREAS, the billing of one physician by a second physician for services performed on a patient hinders the physician-patient relationship and lays the groundwork for the development of fee splitting and kickbacks either apparent or concealed; and

WHEREAS, such billing practices are not in the best interests of the patient; now, therefore, be it

Resolved:

1. That consultations in exfoliative cytology be subject to the ethical precepts required of all other medical consultations.

2. That this House of Delegates recommend to the C.M.A. Council that it cause to be published for the information of all C.M.A. members (a) the ethical principles applicable to medical consultations and (b) the laws of the State of California which prohibit fee splitting and kickbacks regardless of whether they are apparent, concealed or implied.

ACTION: Adopted by House.

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CARE FOR THE AGED

Resolution No. 30.
Author: Edward Liston.
Representing: Santa Clara County Medical Society.

WHEREAS, the medical profession in the past has chosen freely to accept special arrangements for the treatment and care of certain groups, such as the indigent, crippled children, the clergy, the blind, military dependents, patients suffering from tuberculosis or venereal disease and other such categories; and

WHEREAS, these special arrangements have been accepted by the free choice of the medical profession acting as free men; and

WHEREAS, the needy aged constitute a group requiring special arrangements for their medical care; now therefore, be it

Resolved: That the medical profession of California continue its efforts to develop plans for the medical care of the needy aged as a special group, and that all such plans for their special care should be subject to the free choice of free men and should not be dictated by political power.

ACTION: Adopted by House.

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"UNIT VALUE" SURVEYS

Resolution No. 31.

ACTION: Not adopted by House.

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C.P.S. EMERGENCY SERVICE PAYMENTS

Resolution No. 32.
Author: Warren L. Bostick.
Representing: Ninth Councilor District.

Resolution No. 33 combined with No. 32 by C.P.S. Reference Committee and following substitute resolution offered:

Resolved: That the House of Delegates request the Board of Trustees of the C.P.S. to appoint a committee composed of physicians not employed by C.P.S. to review the general situation of the diversion and payments to hospitals of procedures and facilities that can be provided in the office of the private physician to his justified benefit; and be it further

Resolved: That if this study committee finds it feasible, that the C.P.S. Fee Schedule include a tray fee in doctors' offices for surgery and this fee be on the same basis as tray fees paid hospitals for the same procedure; and be it further

Resolved: That the Board of Trustees, acting with the advice of said committee, is requested to report its conclusions and recommendation regarding these problems to the House of Delegates at the next Annual Meeting.

ACTION: Adopted by House.

Resolution No. 33—See Resolution No. 32.

Resolution No. 34—See Resolution No. 16.

NURSES' TRAINING PROGRAMS

Resolution No. 35.
Author: Leon P. Fox.
Representing: Santa Clara County Medical Society.

WHEREAS, previous attempts, by individuals, to inform and interest California physicians in the present day trend of nursing education, have been practically futile; and

WHEREAS, efforts of this House by previous resolutions to effect stronger representation on Advisory Committees of Nursing Education Organization at state and national level for the purpose of improving curriculums and patient care instruction, from the physicians' standpoint, have accomplished very little (note pre-convention report of Committee on Other Professions); and

WHEREAS, the Santa Clara County Medical Society has been able to acquire stronger local physician representation, on the two-year Junior College Program Advisory Committee, and is endeavoring to similarly participate actively in the four-year Collegiate and three-year Diploma Hospital Programs; now, therefore, be it

Resolved: That the Council through its district members direct all component societies to initiate effective physician participation at the grass roots level in all new or proposed nurse education programs for the purpose of improving the nurse graduate of the future; and be it further

Resolved: That the Council continue its efforts more aggressively, to effect enlightened physician representation on Advisory Boards to Nursing Education and licensing organizations at the state level; and be it further

Resolved: That the Delegates to the A.M.A. from the C.M.A. be directed to act similarly at the national level.

ACTION: Adopted by House.

SPECIALISTS AS ADVISORS

Resolution No. 36.

ACTION: Withdrawn by author.

TAXATION

Resolution No. 37.
Author: Roberta Fenlon.
Representing: San Francisco Medical Society.

WHEREAS, many health plans advanced by legislators are described as covered by "federal aid"; and

WHEREAS, "federal aid" money comes from the taxpayers of America and not from supposedly unlimited government coffers; and

WHEREAS, the growing entry of government into medicine adds to the already heavy tax burden of American citizens; now, therefore, be it

Resolved: That the C.M.A. Public Relations Committee be instructed to prepare factual information for dissemination on the cost of government financed medical care as it affects each individual taxpayer.

ACTION: Adopted by House.

ANNUAL MEETING DATES

Resolution No. 38.
Author: Edgar A. Wayburn.
Representing: San Francisco Medical Society.

Resolution No. 71 was combined by the reference committee with Resolution No. 38 and the following substitute offered:

Resolved: That the C.M.A. return as nearly as possible to its usual meeting time, and this return be effective as soon as feasible; and be it further

Resolved: That our delegation to the A.M.A. seek the appointment of a committee to plan the integration of all medical meetings in a manner to minimize conflict of meeting dates.

ACTION: Adopted by House.

POSTGRADUATE TEACHING COURSES

Resolution No. 39.
Author: Edgar Wayburn.
Representing: San Francisco Medical Society.

WHEREAS, the present system of postgraduate education at C.M.A. conventions prevents the participation of the membership in both the scientific and business sessions; and

WHEREAS, the attendance and caliber of the scientific sessions should be increased in accord with the size and prestige of the C.M.A.; now, therefore, be it

Resolved: That the C.M.A. Committee on Scientific Work be requested to schedule any postgraduate teaching courses so they will least conflict with the scientific or business sessions of the C.M.A.

ACTION: Adopted by House.

* * *

RELATIVE VALUE UNITS BY AREA

Resolution No. 40.
Author: Edgar Wayburn.
Representing: San Francisco Medical Society.

WHEREAS, it is impractical for insurance plans to bargain for fees on county levels; and

WHEREAS, figures for average charges in various counties are available; and

WHEREAS, there are fee variations in various urban and rural areas; now, therefore, be it

Resolved: That the C.M.A. Council study the desirability and feasibility of amending the relative value study to develop relative values of units for appropriate areas in the state.

ACTION: Referred to Commission on Medical Services for further consideration.

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Resolution No. 41—See Resolution No. 16.

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HEALING ARTS LICENSURE

Resolution No. 42.
Author: Dudley Bell.
Representing: Eighth District.

WHEREAS, Assembly Bill 827, which would create a Division of Healing Arts separating such arts from the trades within the Department of Professional and Vocational Standards, includes optometry: and

WHEREAS, optometry is defined by the California Business and Professions Code (Div. 2, Ch. 7, Art. 3, Sec. 3041) as ". . . the employment of any means other than the use of drugs for the measurement of the powers or range of human vision or the determination of the accommodative and refractive states of the human eye or the scope of its functions in general or the adaption of lenses or frames for the aid thereof"; and

WHEREAS, optometry is limited by this code to the measuring of the eye and to the fitting and sale of glasses; now, therefore, be it

Resolved: That the C.M.A. state its opposition to the inclusion of a nonhealing, nonmedically related vocation in the Division of Healing Arts as proposed by Assembly Bill 827.

ACTION: Referred to Committee on Legislation.

PUBLIC ASSISTANCE MEDICAL CARE PROGRAM

Resolution No. 43.
Author: Dudley Bell.
Representing: Eighth District.

WHEREAS, the recently enacted Public Assistance Medical Care Program is administratively unwieldy and costly; and

WHEREAS, the necessary rules of the State Social Welfare Department in administering the Act are complex and difficult of interpretation by doctor or patient, causing reluctance on the part of the doctor to involve himself in the paperwork and restrictions incident to the program and causing confusion and frustration in the patient; now, therefore, be it

Resolved: That the California Medical Association urges that the money made available by federal and state governments under this program for the provision of medical care to indigent persons of various classes be used instead for the purchase of health insurance from California Physicians' Service, such insurance program to be designed by members of the California Medical Association in consultation with the State Social Welfare Department, in order to provide for these patients the maximum amount of medical care which can be purchased for the dollar expended and in order to eliminate as far as possible costly administrative procedures presently necessary in the resolution.

ACTION: Referred to Commission on Medical Services for further consideration.

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Resolution No. 44—See Resolution No. 4.

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C.M.A. DEPARTMENT OF NEGOTIATIONS

Resolution No. 45.
Author: Wm. H. Thompson.
Representing: San Mateo County Medical Society.

WHEREAS, in 1957 this House of Delegates passed Resolution No. 9 concerning the development of a department within the C.M.A. for the purpose of negotiating with representatives of groups wishing to provide medical care to private citizens of the state; and

WHEREAS, in 1958 this House of Delegates passed a substitute resolution for resolutions Nos. 25, 30 and 64 directing the Council to expedite formation of such a department to study specified problems; and

WHEREAS, such a department will be unable to properly negotiate without a fee schedule approved and supported by this House of Delegates; and

WHEREAS, in order to receive wide approval of the members of the C.M.A. such a fee schedule must

allow for a certain degree of local control and geographic variation of fees; now, therefore, be it

Resolved: That the C.M.A. Council take immediate steps to expedite the development of such a department as previously directed by this House of Delegates by resolutions in 1957 and 1958; and be it further

Resolved: That the immediate concern of this department is the study of the feasibility and advisability of the development of a fee schedule for negotiating purposes under the following basic principles:

1. In cooperation with local county medical societies a dollar unit value shall be determined for each of the various county societies.

2. This dollar unit value shall be determined with the approval of each local county medical society and after consideration of the variations of cost of medical practice and other factors which determine the variation of fees in different geographic areas.

3. These various fee schedules may be weighted and combined into a single fee schedule for negotiating purposes.

4. These various fee schedules or the combined fee schedules shall be the only basis on which the C.M.A. shall negotiate fees for medical services provided by its members.

5. These fee schedules may be reduced for certain classifications of patients as authorized by the House of Delegates.

and be it further

Resolved: That the Council of the C.M.A. be directed to report the findings of this department and Council recommendations on these findings to the next House of Delegates.

ACTION: Referred to the Council.

C.M.A. COMMITTEE APPOINTMENTS

Resolution No. 46.
Author: William H. Thompson.
Representing: San Mateo County Medical Society.

WHEREAS, the preponderance of C.M.A. committee members are presently from Los Angeles and San Francisco; and

WHEREAS, some of the smaller county medical societies are not adequately represented on C.M.A. committees and should now receive an increased representation in view of their increasing relative size; and

WHEREAS, this House of Delegates believes that C.M.A. committee appointments should be made only after consideration of reasonable geographic and proportionate representation, the availability of interested, qualified members and a policy of rotation of members through committees; now, therefore, be it

Resolved: That this House of Delegates instruct the Council to initiate a definitive policy regarding committee appointments to include the following principles:

1. New appointments to committees shall be made only after due consideration of a member's interest, ability, qualification and recommendations and with reasonable consideration of overall geographic and proportionate representation.

2. Committee appointments shall not be made on an honorary basis.

ACTION: Adopted by House after one "Resolved" section that would have limited appointees to two consecutive terms had been deleted on recommendation of the reference committee.

GOVERNMENT PROVISION OF MEDICAL SERVICES

Resolution No. 47.
Author: Wm. H. Thompson.
Representing: San Mateo County Medical Society.

WHEREAS, legislation concerning medical services is often worded to the effect of "providing medical services" although the intent of the legislation is to provide for payment or reimbursement of medical services; and

WHEREAS, it is in the public interest that it be informed that it is the medical profession and not government agencies which provides medical services; now, therefore, be it

Resolved: That the C.M.A. actively oppose the inclusion of wording in any legislation which, in effect, provides medical services for any group of persons, and, be it further

Resolved: That the C.M.A. expand every effort to revise the wording of legislative acts to the effect of providing for payment or reimbursement of medical expenses; and be it further

Resolved: That the C.M.A. delegates to the A.M.A. submit a similar resolution to the A.M.A. House of Delegates.

ACTION: Adopted by House in above form, which represents an amendment in the second "Whereas" from the original introduction.

SEGREGATION OF FUNDS

Resolution No. 48.
Author: Wm. H. Thompson.
Representing: San Mateo County Medical Society.

WHEREAS, legislation providing funds for medical services usually does not specify the amount or proportion of the funds to be used for physician and

dentist services as opposed to drugs, nursing care, hospitalization, etc. and

WHEREAS, this policy is actuarially unsound and violates good business principles; and

WHEREAS, this policy leads to the false impression by the public that the high cost of medical care is largely due to the cost of these services: now, therefore, be it

Resolved: That the C.M.A. forcibly bring to the attention of legislative representatives the importance of segregation of funds for physician and dentist services from funds for drugs, nursing care, hospitalization etc., and be it further

Resolved: That the C.M.A. work to incorporate this policy of segregation of funds into any legislation which does not specify the amount or portion of funds for physician and dentist services; and be it further

Resolved: That the C.M.A. delegates to the A.M.A. submit a similar resolution to the next A.M.A. House of Delegates.

ACTION: Adopted by House in above form, which was amended from original introduction on motion by the reference committee.

INSURANCE INCLUSION OF CONSULTATION

Resolution No. 49.
Author: Dudley Bell.
Representing: Eighth District.

WHEREAS, the consultation is not only desirable but often required as an integral part of patient care; and

WHEREAS, Blue Cross and other health insurance carriers do not provide their members with coverage for this necessary medical service; and

WHEREAS, the consultation is an insurable risk as demonstrated by its inclusion in recent C.P.S. contracts; now, therefore, be it

Resolved: That the C.M.A. strongly urge Blue Cross and other health insurance carriers to include coverage for the consultation in their health insurance contracts.

ACTION: Adopted by House.

INSURANCE INCLUSION OF DIAGNOSTIC STUDY

Resolution No. 50.
Author: Dudley Bell.
Representing: Eighth District.

WHEREAS, the diagnostic study is a recognized procedure and valuable in patient care; and

WHEREAS, such procedure is expressly excluded from some health insurance contracts offered by C.P.S. and Blue Cross; and

WHEREAS, such exclusion can impose major expense upon patients having health insurance and impose limitations on the physician's care of such patients; and

WHEREAS, the diagnostic study is an insurable risk; now, therefore, be it

Resolved: That the C.M.A. urge all health insurance carriers to include the diagnostic study in future contract offerings.

ACTION: Referred to Commission on Medical Services.

A.M.A. DUES "TODAY'S HEALTH"

Resolution No. 51.
Author: Gerald W. Shaw.
Representing: Los Angeles County Medical Association.

WHEREAS, the membership dues to the American Medical Association includes a subscription to the *Journal of the American Medical Association;* and

WHEREAS, the magazine *Today's Health* is also a publication of the American Medical Association, which is a valuable asset for the member's reception room: and

WHEREAS, subscription to *Today's Health* is not included as part of the American Medical Association dues; now, therefore, be it

Resolved: That the House of Delegates encourage its delegates to the A.M.A. to introduce a resolution encouraging every physician member to have *Today's Health* in his home and office.

ACTION: Adopted by House in above form, which was amended from the original introduction on recommendation of the reference committee.

UNPROFESSIONAL CONDUCT

Resolution No. 52.

ACTION: Withdrawn by author.

UNPROFESSIONAL CONDUCT—DEFINITION

Resolution No. 53.
Author: William F. Quinn.
Representing: Los Angeles County Medical Association.

WHEREAS, the prescribing of so-called dangerous drugs, as defined in the Pharmacy Code, by a few physicians without a prior examination of the patient or medical indication, constitutes a problem to law enforcement agencies; and

WHEREAS, the Business and Professions Code is vague in its definition of this phase of unprofessional conduct; now, therefore, be it

Resolved: That the California Medical Association direct its Council to initiate legislation to amend the code to the effect that:

Prescribing of so-called dangerous drugs, as defined in the Pharmacy Code, without a prior examination of the patient or medical indications therefor, shall constitute unprofessional conduct.

ACTION: Adopted by House in above form, which was amended from original introduction on recommendation of the reference committee.

Resolution No. 54—See Resolution No. 4.

Resolution No. 55—See Resolution No. 2.

PROPOSED DEPARTMENT OF PUBLIC HEALTH

Resolution No. 56.
Author: Warren A. Wilson.
Representing: Los Angeles County Medical Association.

WHEREAS, legislation is now underway in California to transfer certain boards of licensure from the Bureau of Professional and Vocational Standards into a new Division of Healing Arts to be administered by the State Department of Public Health under which will probably be placed the Board of Medical Examiners; and

WHEREAS, the Board of Optometric Examiners was one of the first to propose transfer to the new division; and

WHEREAS, the inclusion of the new optometrists under a Healing Arts Board will further the persistent organized and well financed national attempt on the part of optometrists to present themselves to the public as the group primarily responsible to the public for eye care and further their avowed intent to make visual care the exclusive field of optometry by legislation as soon as possible, excluding all exceptions; and

WHEREAS, it is not in the public interest that the public should believe that optometrists are qualified to diagnose and treat such sight destroying diseases as glaucoma; and

WHEREAS, all such attempts to blur the distinction between the refraction technician or optometrist and the medical specialist or ophthalmologist are an attempt to enter the practice of medicine by legislation rather than by education; now, therefore, be it

Resolved: That the Los Angeles Society of Ophthalmology and Otolaryngology and the Long Beach Eye, Ear, Nose and Throat Society request the House of Delegates of the C.M.A. to express its opposition to inclusion of the Board of Optometric Examiners under a Division of Healing Arts and requests the legislative representatives of the California Medical Association to oppose such action as not being in the public interest.

ACTION: Referred to Committee on Legislation.

RADIATION HAZARD

Resolution No. 57.

ACTION: Not adopted by House.

POSTGRADUATE EDUCATION

Resolution No. 58.
Author: Cedric C. Johnson.
Representing: Sonoma County Medical Society.

WHEREAS, the quality of medical care and services is dependent upon continued effective postgraduate training; and

WHEREAS, the present California Medical Association's Postgraduate Medical and Surgical Assemblies have greatly served in the dissemination of medical advances through regional and circuit courses; there is still a hiatus between "learning about" and "learning to practice expeditiously" these many advances; and

WHEREAS, the principle of "in-service training" developed in business and industry may be applied to provide integrated medical, surgical and special professional training in improved methods, both diagnostic and therapeutic technical procedures; and

WHEREAS, federal and state legislatures and other governmental agencies are tending to encroach upon trends in medical education and practice; and

WHEREAS, there is need for training of greater number of well qualified medical ancillary personnel, clinical laboratory, x-ray technologists, various diagnostic, therapeutic and rehabilitative personnel to meet the increasing demands in private practice, hospitals, clinical pathology, x-ray units and ancillary medical organizations; and

WHEREAS, the scope of the overall development of postgraduate education necessitates combined and integrated consultation knowledge, experience, prestige and financial resources of the medical professional organization, educators, financial consultants and participating individual physicians; now, therefore, be it

Resolved: That the House of Delegates directs the Committee on Postgraduate Activities of the California Medical Association to investigate the feasibility, the ways and means to further the establishment of an integrated school of postgraduate medical education together with provisions for training of ancillary personnel.

ACTION: Referred to Council.

HEALTH INSURANCE PLANS

Resolution No. 59.

ACTION: Not adopted by House.

SPECIALTY GROUPS

Resolution No. 60.
Author: James M. Thompson.
Representing: San Francisco Medical Society.

WHEREAS, there are well organized societies which represent both specialty and general practice groups in the economic field for the membership; and

WHEREAS, the members of these organizations are members of C.M.A.; and

WHEREAS, certain of these organizations represent the great majority of practicing specialists and general practitioners in studying the particular needs and problems of such groups and their patients; and

WHEREAS, the C.M.A. Committee on Fees has traditionally sought advice in specific matters from representatives of such organizations; and

WHEREAS, it is desirable that such bodies express their needs to—and work through the Medical Services Commission and its committees; now, therefore, be it

Resolved: That (1) Such organizations now organized and which may be organized in the future be encouraged to bring their problems to the Medical Services Commission of the C.M.A., and its committees, and (2) that C.M.A. recognize and encourage the development of such organized groups for the study of economic aspects of medical care and permit those organizations which clearly represent the majority of such specialty and general practice groups to suggest where needed, advisory representatives to the Committee on Fees of C.M.A. and such other committees where such representatives are needed.

ACTION: Adopted by House with minor amendments in wording recommended by the reference committee.

OLD AGE MEDICAL CARE

Resolution No. 61.
Author: Edgar Wayburn.
Representing: San Francisco Medical Society.

WHEREAS, the provision of overall medical care for persons over 65 years of age is one of the leading socio-economic problems of our generation; and

WHEREAS, the A.M.A. House of Delegates has recognized this outstanding need but has offered a resolution at the December 1958 Clinical Session which overlooks the costs of hospital care, drug therapy and ancillary medical services and the proportionate cost of services by physicians and even the principle of broad pooling of risks; therefore, be it

Resolved: That the House of Delegates of the C.M.A. instruct the California delegation to convey these opinions to the A.M.A. and request that adequate plans be developed as soon as possible to provide persons over 65 with adequate voluntary health insurance coverage; and be it further

Resolved: That all physicians should continue to do whatever they can to give proper medical care to older persons, regardless of cost.

ACTION: Adopted by House.

HEALTH INSURANCE

Resolution No. 62.

ACTION: Not adopted by House.

MEDICAL ASPECTS OF IMMUNIZATION

Resolution No. 63.
Author: Robert L. Stirrett.
Representing: L.A.C.M.A. member.

WHEREAS, certain mass immunization programs are being carried out under sponsorship and direction of schools, lay organizations, etc.; and

WHEREAS, lack of responsibility results in incomplete immunizations and follow up booster programs; and

WHEREAS, permanent records are important for future reference by patients, his personal physician, hospital, dispensary, or clinic, in case of illness, accident or epidemic; now, therefore, be it

Resolved: That this House urges immunization of every individual, regardless of ability to pay, and that records of such immunization be maintained and made available to the individual and/or his personal physician.

ACTION: Adopted by House as shown above, which represents amendment from the original introduction on recommendation of the reference committee.

SENATE BILL NO. 515

Resolution No. 64.
Author: Lewis T. Bullock.
Representing: Los Angeles County Medical Association.

WHEREAS, there has been introduced in the State Legislature, Senate Bill No. 515 which provides for the creation by each county of a Special Medical Care Revolving Fund for Medical Care Recipients; and

WHEREAS, this bill provides a single system of payment for medical services and allows payment directly to the physicians; now, therefore, be it

Resolved: That the Legislative Committee be requested to propose such amendments to Senate

Bill No. 515 as may be consistent with the policy embodied in the final version of Resolution No. 65.

ACTION: Amnded on recommendation of reference committee and adopted in form shown above.

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WELFARE PAYMENTS

Resolution No. 65.
Author: Paul V. Morton.
Representing: Santa Clara County Medical Society.

WHEREAS, confusion exists regarding the method of payment to physicians for services rendered to recipients of the Public Assistance Program; and

WHEREAS, the physicians of some county societies believe, and have so voted, that they prefer direct recipient payments because they,

1. Better preserve a normal doctor-patient relationship.
2. Make the principle of indemnification more feasible.
3. Completely and fully inform the patient of the amount of money allotted for his medical care.
4. Would direct patient complaints and criticisms regarding amounts of medical allowances to the Welfare Department rather than to the physicians.
5. Place the commodity of medicine on the same basis as other basic needs, such as food, shelter, and clothing, which are customarily paid for on a money payment principle, as opposed to payment in kind; now, therefore, be it

Resolved: That a policy of direct payment to the patient by the Welfare Departments be recommended where feasible and desired, and that in local areas where this is not deemed feasible the matter be decided on a local option basis according to the vote of each constituent medical society.

ACTION: Amended on recommendation of the reference committee and adopted by House as shown above.

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CALIFORNIA PHYSICIANS' SERVICE

Resolution No. 66.

ACTION: Not adopted by House.

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PUBLIC ASSISTANCE

Resolution No. 67.

ACTION: Withdrawn by author.

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VETERANS HOME TOWN MEDICAL CARE PROGRAM

Resolution No. 68.
Author: John Murray.
Representing: San Joaquin County Medical Society.

WHEREAS, more and more veterans are obtaining care from the Veterans Administration; and

WHEREAS, there is a home town medical care program for veterans; and

WHEREAS, many veterans have no knowledge of this home town medical care program; now, therefore, be it

Resolved: That the California Medical Association Public Relations Department make additional effort to inform all veterans of the home town medical care program.

ACTION: Adopted by House.

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HEALTH INSURANCE PLANS

Resolution No. 69.

ACTION: Not adopted by House.

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BASIC MEDICAL SCIENCE COMMITTEE

Resolution No. 70.
Author: Thomas Foster.
Representing: Santa Clara County Medical Society.

WHEREAS, it is the obligation of the medical profession not only to provide the public the best possible care, but also to protect the public from incompetent practitioners of the healing arts; now, therefore, be it

Resolved: That the Council appoint a committee specifically for the purpose of reviewing existing Basic Medical Science laws, and the formulation of an appropriate program of action to be submitted for approval and implementation at the next regular session of the C.M.A.

ACTION: Adopted by House.

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Resolution No. 71—See Resolution No. 38.

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MEDICAL FEES

Resolution No. 72.
Author: John F. Needham.
Representing: San Luis Obispo County Medical Society.

Resolutions No. 73 and No. 77 combined with No. 72 and the following substitute resolution offered by the reference comittee:

WHEREAS, the Relative Value Study is medicine's effort to produce a guide for the realistic consideration of medical economics by those interested in voluntary health insurance; and

WHEREAS, some insurance companies have apparently arbitrarily assigned a dollar factor in order to produce a fee schedule; and

WHEREAS, some insurance companies apparently suggest to the public that fee schedules so produced are actually payment in full for medical services

thereby converting an indemnity contract to a service contract; and

WHEREAS, California physicians are not bound by any fixed fee schedule except as physician members of C.P.S. or other service contracts to which they are a party; now, therefore, be it

Resolved: That—

1. The C.M.A. reaffirm the principle of the usual fee indemnity plan incorporating the principle of prior agreement which has been in effect since 1954; and

2. That C.M.A. reaffirm its policy that it is the responsibility of the local medical societies to review, when indicated, the fees charged by their members; and

3. That these local review committees be available to all interested parties concerned whether they be insurance companies, doctors or patients; and

4. That the information contained in this report and resolution be transmitted to the health insurance industry in California; and

5. That we encourage each component medical society to cooperate in the presentation of indoctrination courses for the claims adjustors of health insurance plans and appropriate personnel in their local areas.

ACTION: Adopted by House as proposed by reference committee.

Resolution No. 73—See Resolution No. 72.

INSURANCE REPORTS

Resolution No. 74.
Author: Charles C. Gill.
Representing: Los Angeles County Medical Association.

WHEREAS, many insurance companies and public agencies request reports about patients or have letters of inquiry, which is a necessary service the physician must render them; and

WHEREAS, the senders of such letters of inquiry usually furnish only the number of copies of the report they desire, or often ask for the report on the back of the letter they sent; and

WHEREAS, if the doctor wishes a complete record of the entire correspondence he must then make a copy of any letter or form, in order to have both the questions as well as the answers and this is a tedious item of extra work for the physician's office; now, therefore, be it

Resolved: That the C.M.A. notify all insurance companies and public agencies that it would be a courteous time-saver to enclose an extra copy of any letter, form or other inquiry, to be retained by the doctor if he so desires.

ACTION: Adopted by House.

RECOGNITION OF SERVICE

Resolution No. 75.
Author: P. C. Barrette.
Representing: Santa Clara County Medical Society.

WHEREAS, the value and privilege of membership in the C.M.A. is well known to and frequently spoken of by men in and associated with the medical arts; and

WHEREAS, it is not so frequently remembered that the demands pertaining to membership in the C.M.A. are also great; and

WHEREAS, the delegates here gathered recognize the honors and privileges of membership in C.M.A., and to recognize the extent of each year's effort and the expense in time and lucre of maintaining a proper aspect as a member of the C.M.A.; now, therefore, be it

Resolved: That this House of Delegates declares that it is and will be the policy of the C.M.A. through successor Houses of Delegates to accept as a Senior Member, one who comes before the House having completed forty years of medical practice, of which the immediately preceding twenty-five years have been as a member of the C.M.A. Acceptance as a Senior Member entails the forgiveness of C.M.A. dues thenceforth; and be it further

Resolved: That the C.M.A. Councilors prepare a suitable scroll to be presented to any and every Senior Member created by a House of Delegates under this policy declared.

ACTION: Referred to Constitution Study Committee.

CONFLICTING INTERESTS

Resolution No. 76.

ACTION: Not adopted by House.

Resolution No. 77—See Resolution No. 72.

AMENDMENTS TO BY-LAWS

Listed below are the amendments to the By-Laws of the California Medical Association which were approved by a two-thirds vote at the 1959 House of Delegates. In some instances, where technical changes were approved, this list shows both the resolution introduced for the amendment and the resulting language from such amendment.

BY-LAW AMENDMENT NO. 1

By-Law Amendment No. 1.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That Chapter VII, Section 10, of the By-Laws be amended by deleting the words "The secretary shall be chairman of the committee."

The section will now read:

Section 10.—Committee on Scientific Work

There shall be an independent standing committee on scientific work consisting of the secretary, secretaries of the sections on general surgery and internal medicine, and three other members appointed by the Council, each of these three members to serve for terms of three years, one member being appointed each year.

This committee shall determine the character and scope of the scientific proceedings of the Association for each session, and shall invite the guest speakers, subject to the instructions of the Council.

At least thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers and discussions shall be presented.

This committee shall also act as the Committee on Arrangements for the annual session. It shall have charge of all local arrangements not otherwise provided for. It shall provide suitable meeting places and shall have general charge of all local arrangements. It shall have power to appoint local advisory members and subcommittees to aid in its work.

This committee shall have at least one joint session with the section secretaries, at a time and place to be designated by the chairman of the committee, at least forty-five days prior to the annual session, to coordinate more efficiently the various activities of the Association at its annual session. The chairman of the local committee on arrangements shall be invited to attend this meeting.

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BY-LAW AMENDMENT NO. 2

By-Law Amendment No. 2.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That Chapter V, Section 2, of the By-Laws be amended by deleting the word "November" used in that section and substituting therefor the word "September."

The section will now read:

Section 2.—Representation

Commencing with the 1952 regular session of the House of Delegates, each component society shall be entitled to one delegate for each fifty (50) active members or major fraction thereof, according to its membership as of the first day of September of the preceding year; provided, however, that each component society shall be entitled to a minimum of two delegates.

* * *

BY-LAW AMENDMENT NO. 3

By-Law Amendment No. 3.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That paragraphs (a) through (g) of Chapter VII, Section 1 of the By-Laws be amended by deleting all language therein; and be it further

Resolved: That the following be substituted so this section reads as follows:

Section 1.—Commissions and Standing Committees

This Association has the following commissions and standing committees that are subordinate to the respective commissions as follows:

(a) Commission on Medical Services, responsible for the activities of and through which the following standing committees shall report:

1. Committee on Fees,
2. Committee on Indigent and Aged,
3. Committee on Government Financed Medical Care,
4. Committee on Rehabilitation.

(b) Commission on Public Agencies, responsible for the activities of and through which the following standing committees shall report:

1. Committee on State Medical Services,
2. Committee on Mental Health,
3. Committee on Other Professions,
4. Committee on Veterans' Affairs,
5. Committee on Adoptions.

(c) Commission on Community Health Services, responsible for the activities of and through which the following standing committees shall report:

1. Committee on Rural Health,
2. Committee on School Health,
3. Committee on Industrial Health,
4. Committee on Civil Defense and Disaster,
5. Committee on Blood Banks,
6. Committee on Allied Health Agencies.

(d) Commission on Public Policy, responsible for the activities of and through which the following standing committees shall report:

1. Committee on Legislation,
2. Committee on Public Relations.

(e) Commission on Medical Education, responsible for the activities of and through which the following standing committees shall report:

1. Committee on Postgraduate Activities,

2. Committee on Maternal and Child Care.
3. Committee on Scientific Work.

(f) Cancer Commission, responsible for the activities of this Association in the fields of cancer research, prevention, education and control.

(g) Commission on Professional Welfare, responsible for the activities of and through which the following standing committees shall report:

1. Committee on Health and Accident Insurance,
2. Medical Review and Advisory Board,
3. Committee on Private Practice of Medicine by Medical School Faculty Members.

(h) Judicial Commission, which shall hear and decide all appeals of disciplinary actions taken by component societies in the manner and as provided in Chapter III of the By-Laws.

* * *

BY-LAW AMENDMENT NO. 5

By-Law Amendment No. 5.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That Chapter V, Section 10, of the By-Laws be amended by deleting the word "November" used in that section and substituting therefor the word "September."

The section will now read:

Section 10.—Duties of Credentials Committee

The secretary of the Association shall supply the Committee on Credentials with the necessary information concerning the membership of the House of Delegates.

The secretary shall give this committee a list of component societies, showing the total membership as of September 1 of the preceding year. This committee shall ask each delegate and alternate to present his written credentials, but shall accept the official written list submitted by the secretary of any component society; provided that such written list be sent to the secretary of the Association at least fifteen days before the beginning of the annual session.

The committee shall make a written report to the House of Delegates of the delegates and alternates entitled to membership therein.

* * *

BY-LAW AMENDMENT NO. 6

By-Law Amendment No. 6.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That paragraphs (c) and (d), Section 3, Chapter VII be amended so that this paragraph shall read as follows:

(c) In nominating commission members, the Council shall endeavor to maintain on the membership of each commission the chairmen of the committees that are subordinate to and report through such commission. Where a commissioner's appointment is by virtue of a committee chairmanship, his term of office on a commission shall correspond to his term as chairman of a subordinate committee. The members of the Commission on Public Policy shall be selected from the members of the Committee on Legislation and the members of the Committee on Public Relations.

(d) The Council may, by three-fourths vote of all voting members, rescind an appointment to a Commission for nonparticipation in commission activities, violations of the code of medical ethics or of any section of the Business and Professions Code pertaining to licensure, privilege or moral turpitude. Vacancies occurring between annual sessions shall be filled by the Council.

(New language in this section represents the second sentence of subsection (c) and the first sentence of subsection (d), together with minor changes in wording for grammatical purposes.)

* * *

BY-LAW AMENDMENT NO. 7

By-Law Amendment No. 7.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That paragraph (b), Section 5, Chapter VII be amended so that this paragraph shall read as follows:

(b) The Council may, by three-fourths vote of all voting members, rescind or withdraw an appointment to a committee for nonparticipation in committee activities, violations of the code of medical ethics or any section of the Business and Professions Code pertaining to licensure, privilege or moral turpitude. Vacancies occurring between annual sessions shall be filled by the Council.

(The amendment represents the addition to the language of the section of the first sentence shown above.)

* * *

BY-LAW AMENDMENT NO. 8

By-Law Amendment No. 8.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That Chapter VII, Section 9, of the By-Laws is hereby amended to reletter paragraphs (c), (d), and (e) so they will be lettered, respectively, paragraphs (d), (e) and (f); and be it further

Resolved: That new paragraphs (b) and (c) shall be inserted to read as follows:

(b) The Commission on Public Agencies shall study, investigate and from time to time submit recommendations concerning the activities of public agencies or related organizations in the field of medical care and public health matters. It shall allocate to the various standing committees for which it is responsible particular projects within their respective fields.

(c) The Commission on Community Health Services shall study, investigate and from time to time submit recommendations concerning community health services and activities or organizations and/or agencies in related fields of medical care. It shall allocate to the various standing committees for which it is responsible, particular projects within their respective fields.

and be it further

Resolved: That Chapter VII, Section 10 of the By-Laws be deleted as a section and its content as modified herewith be made subsection (1) of Chapter VII, Section 9 (e) of the By-Laws: this modification to be effected so that the first paragraph of that section shall read:

(e) (1) Committee on Scientific Work

The Committee on Scientific Work shall consist of the secretaries of the sections on General Surgery and Internal Medicine, and three other members appointed by the Council, each of these three members to serve for terms of three years, one member being appointed each year.

The remaining paragraphs to remain unchanged; and be it further

Resolved: That Chapter VII of the By-Laws be amended to renumber Sections 11 and 12 so they will be numbered, respectively, Sections 10 and 11.

(These changes define the duties of two commissions, make technical changes in numbering of sections and delete the requirement that the secretary be the chairman of the Committee on Scientific Work.)

* * *

BY-LAW AMENDMENT NO. 9

By-Law Amendment No. 9.
Author: Clyde L. Boice.
Representing: Santa Clara County.

Resolved: That Section 9 of Chapter VI of the By-Laws of the California Medical Association be amended to eliminate the words "while absent from their places of residence."

This section will now read:

Section 9.—Expenses of Councilors and Officers

Councilors and officers shall be allowed railroad fare or mileage, plus an allowance for maintenance expense, (a) in attending Association, district or county society meetings; (b) meetings of committees of the Association; (c) authorized councilor or officer visits to county societies; (d) and otherwise when on official business, authorized or approved by the Council.

* * *

BY-LAW AMENDMENT NO. 10

By-Law Amendment No. 10.
Author: Claude P. Calloway.
Representing: San Francisco Medical Society.

Resolved: That Chapter III, Section 1, paragraph 9, of the By-Laws of this Association, California Medical Association, is hereby amended to read as follows:

(9) *Suspension; Reinstatement of Suspended Member; Probation.*

(a) If the Judicial Council shall determine to suspend an accused member, the term of such suspension shall be within its discretion. A suspended member shall have no rights or privileges in the society. The Judicial Council at the end of the suspended member's period of suspension shall consider the quality of his behavior during his suspension, and shall determine whether he shall be reinstated to membership in good standing or the period of suspension shall be extended. A suspended member shall not be reinstated until he pays all dues accrued during the period of suspension.

(b) If the Judicial Council shall determine to expel an accused member it may, in its discretion, defer the effective date of the order of expulsion during a fixed period of probation. The Judicial Council shall have authority to determine the conditions of probation and the period thereof, including the privileges of membership during probation. If the accused member violates any of the conditions of probation the Judicial Council may terminate probation and the order of expulsion shall thereupon immediately become effective. If the term of probation is fulfilled without violation of any of the probation conditions, the order of expulsion may be set aside by the Judicial Council on application of the accused member. Members on probation shall pay dues.

AMENDMENTS TO CONSTITUTION

The 1959 House of Delegates considered several proposed amendments to the Constitution which, under the terms of the Constitution, must lie on the table for one year before being brought for vote. The amendments to the Constitution acted upon by the 1959 House of Delegates were introduced at the 1958 session and, in accordance with requirements of the Constitution, were published in the official

journal at least twice during the intervening year. A two-thirds affirmative vote was required for passage of each proposed amendment. The following were adopted:

CONSTITUTIONAL AMENDMENT NO. 1
SECRETARY (-TREASURER)

Constitutional Amendment No. 1.
Author: Donald D. Lum.
Representing: The Council.

Resolved: That Article VI, Section 1, of the Constitution be amended by deleting the term "-Treasurer" from the present term "Secretary-Treasurer" so that the named officer shall be known as "Secretary."

The section will now read:

ARTICLE VI.—OFFICERS
Section 1.—Officers

The officers of this Association shall be a President, a President-Elect, a Secretary, a Speaker of the House of Delegates, a Vice-Speaker of the House of Delegates and an Editor.

* * *

CONSTITUTIONAL AMENDMENT NO. 3
REPRESENTATION ON THE COUNCIL

Constitutional Amendment No. 3.
Author: Sam J. McClendon.
Representing: Constitution Study Committee.

Resolved: That Article III, Part B, Section 9, of the Constitution be amended in subparagraph (a) by deleting the words shown in parentheses below and adding the words shown below in italics, so that subparagraph (a) shall read as follows:

(a) Each councilor district, as specified in this Constitution, shall be entitled to one councilor for each 1,000 *active* members, *or major fraction thereof*, according to its membership as of the first day of (November) *September* of the preceding year; provided that each councilor district shall be entitled to a minimum of one councilor.

This section will now read:

Part B.—Council
Section 9.—Composition*

The Council shall consist of:

(a) Each councilor district, as specified in this Constitution, shall be entitled to one councilor for each 1,000 active members, or major fraction thereof, according to its membership as of the first day of September of the preceding year; provided that each councilor district shall be entitled to a minimum of one councilor.

(b) The president, president-elect, speaker and vice-speaker.

In addition, the secretary and editor, ex officio, without the right to vote.

(c) District councilors shall be elected from the councilor districts.

(d) Elected councilors from any one district shall not, at any time, exceed forty per cent (40 per cent) of the total Council membership.

* * *

CONSTITUTIONAL AMENDMENT NO. 5
CONSIDERATION OF CONSTITUTIONAL AMENDMENTS

Constitutional Amendment No. 5.
Author: W. S. Lawrence.
Representing: Butte-Glenn Medical Society.

WHEREAS, any amendment to the Constitution should be for the greatest good of the Association; and

WHEREAS, the most recent amendment to the Constitution which eliminates the councilors-at-large was passed without prior hearings in the appropriate reference committee during any regular session of the Association; and

WHEREAS, this action has denied interested delegates the opportunity to meet, exchange views, discuss the ramifications and evaluate the appropriateness of the amendment to meet its purpose; and

WHEREAS, the proponents of the amendment would be the last to feel the necessity to press such an action through the House of Delegates without adequate consideration; now, therefore, without prejudice to the previous amendment, be it

Resolved: That Article VIII, Section 3, Paragraph 2 of the Constitution be amended by addition of the following:

This section will now read:

Section 3.—Amendments

Any member of the House of Delegates at any meeting of any session, other than a special session, thereof may present an amendment or amendments to any article or articles or any section or sections of any article or articles of this Constitution.

Such proposed amendment or amendments shall be in writing and shall be filed with the secretary and shall thereafter be published at least twice in separate issues of the official journal of this Association prior to the next session of the House of Delegates.

At the said next session, other than a special session, of the House of Delegates, such proposed amendment or amendments shall be submitted to the House of Delegates, for consideration at any meeting of the House of Delegates during that session, and if two-thirds of the delegates present and voting vote in favor thereof, the same shall be adopted.

Further, such proposed amendment or amendments shall be referred to the appropriate reference committee which shall hold hearings on the proposed amendment or amendments during the course of its regular business while the Association is in convention. If the proposal or proposals are introduced during the first session of the House, hearings shall be held at both the current and the next regular meeting. If the proposal or proposals are introduced during the second session, hearings shall be held at the next meeting, and in either event, prior to submission to the House of Delegates for vote.

CONSTITUTIONAL AMENDMENT OFFERED

A proposed amendment to the Constitution of the California Medical Association was offered at the 1959 session and, in accordance with provisions of the Constitution, was referred to the Reference Committee on Amendments to the Constitution and By-Laws. The proposed amendment must lie on the table for one year and be published twice during that period in CALIFORNIA MEDICINE.

The reference committee suggested that this proposal be studied by the Constitution Study Committee during the year. The proposal will be referred in 1960 to a reference committee for additional study and recommendations to the 1960 House of Delegates.

Constitutional Amendment No. 1.
Author: Arthur Olson.
Representing: Santa Barbara County Medical Society.

Resolved: That Article VIII of the Constitution of the C.M.A. be amended by renumbering the present sections in said Article to 2, 3 and 4 and inserting a new Section 1 as follows:

Section 1.—Eligibility for Appointment

Eligibility for appointment or election to any position, to any committee, or to in any way represent the C.M.A., or to formulate policy for C.M.A., shall depend on the member's not holding a salaried position with or acting in an advisory capacity for, or being retained by a commercial insurance company or health plan which handles health or accident problems during the term of election or appointment. Nor shall such delegates or committee members hold a remunerative political position either appointive or elective. Association with California Physicians' Service is specifically excluded.

Council Meeting Minutes

Tentative Draft: Minutes of the 447th Meeting of the Council, Los Angeles, Ambassador Hotel, March 14, 1959.

The meeting was called to order by Chairman Lum in the Regency Room of the Ambassador Hotel, Los Angeles, on Saturday, March 14, 1959, at 9:30 a.m.

Roll Call:

Present were President Reynolds, President-Elect Foster and Councilors MacLaggan, Wheeler, Todd, Quinn, O'Neill, Kirchner, O'Connor, Shaw, Gifford, Harrington, Davis, Campbell, Sherman, Lum, Bostick and Teall. Absent for cause, Secretary Daniels and Editor Wilbur.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Thomas, Clancy, Marvin, Whelan, Collins and Mrs. Griffith and Dr. Batchelder of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; county society executives Scheuber of Alameda-Contra Costa, Dermott of Sonoma, Jensen of Fresno, Geisert of Kern, Rosenow and Field of Los Angeles, Bannister of Orange, Donmyer of San Bernardino and Neick of San Francisco; Dr. Marshall Porter of the State Department of Mental Hygiene; Dr. William Gardenier and Mr. Wilson Wahlberg of California Physicians' Service; Doctors Francis E. West, Dan O. Kilroy, J. Lafe Ludwig and others.

1. *Approval of Minutes:*

(a) On motion duly made and seconded, minutes of the 445th Council meeting, held February 21-25, 1959, were approved.

(b) On motion duly made and seconded, minutes of the 446th Council meeting, held February 25, 1959, were approved.

2. *Membership:*

(a) A report of membership as of March 11, 1959, was presented and ordered filed.

(b) On motion duly made and seconded in each instance, four applicants were voted Retired Membership. These were: Alberty, W. M., Logsdon, R. O., San Diego County; Atsatt, Rodney, Santa Barbara County; Proescher, Frederick, Santa Clara County.

(c) On motion duly made and seconded in each instance, seven applicants were voted Associate Membership. These were: Wm. H. Tooley, Alameda-Contra Costa County; Byong Sik Kim, George

A. Skinner, Madera County; Harry March, Placer-Nevada-Sierra Counties; Stanley Wolfe, San Francisco County; Herbert Matthews, Samuel Miller, Santa Clara County.

(d) On motion duly made and seconded, reductions of dues were voted for five members because of illness or postgraduate studies.

3. *Welfare Fund Trustees' Request for Meeting:*

Mr. Hassard discussed the background of a request received from certain union labor welfare fund trustees for further meetings with Association representatives on the subject of medical and surgical indemnities to be paid by their trust funds.

After discussion, tabling and later report by a special committee, it was regularly moved, seconded and voted to adopt the following resolution:

Resolved,

1. The C.M.A. Council favor the determination by each county society of the level of usual fees being charged in its area.

2. The C.M.A. Council recommend that this level of usual fees be expressed as a dollar coefficient to current editions of the C.M.A. relative value study, such coefficient to reflect economic conditions in the area concerned.

3. The Commission on Medical Services be requested to stimulate each county medical society to expedite the determination of this level of usual fees as early as possible. For this purpose the Council recommends that the Commission be augmented by the Committee for Emergency Action on an advisory basis.

On motion duly made and seconded, it was voted that the executive committee of the Commission on Medical Services seek to hold another meeting with the fund trustees making the request.

4. *Bureau of Research and Planning:*

Dr. Francis E. West, chairman, reported on a meeting of the Bureau of Research and Planning and submitted several recommendations on which Council approval was sought.

On motion duly made and seconded, it was voted (1) to empower the Bureau of Research and Planning to secure space for a library, (2) to secure the services of a librarian to compile, digest, file and cross-index reference materials, (3) to name, through the Committee on Committee Nominations, two additional members of the bureau to serve in the stead of two members who cannot serve, and (4) to accept the concept that the bureau is an advisory body and is to advise with the various commissions and committees which will then report to the Council.

5. *Report of the President:*

President Reynolds reported on a meeting he had attended in Pittsburgh, Penn., as a member of the Committee on Medical Care Plans of the Council on Medical Service of the American Medical Association.

6. *Nursing Homes:*

On motion duly made and seconded, it was voted to refer to the Commission on Medical Services the overall study of nursing homes.

7. *California Hospital Association:*

The chairman announced, with sorrow, that Howard Hatfield, president of the California Hospital Association, had died. On motion duly made and seconded, it was voted to send letters of sympathy to Mrs. Hatfield and to the California Hospital Association and to adjourn the present meeting in his memory.

8. *Appointment of Secretary:*

On motion duly made and seconded, it was voted to accept, with regret, the resignation of Dr. Albert C. Daniels as secretary of the Association.

Nominations for secretary were received and on the basis of a written ballot, Dr. Matthew N. Hosmer was elected secretary for the Association year ending with the 1960 Annual Session.

9. *Commission on Public Policy:*

Dr. Dan O. Kilroy, chairman of the Commission on Public Policy, Mr. Ben Read and Mr. Hassard reviewed several bills now before the State Legislature, covering such topics as the right of coroners to retain tissues, cancer control, definition of insanity, right to sue for false and malicious statements against professional licentiates and the public assistance law.

Dr. J. Lafe Ludwig, legislative committee member of both the Association and the A.M.A., reported that the Keogh-Simpson bill, which would provide tax deductions for annual amounts set aside into a retirement fund by self-employed persons, would be on the floor of the House of Representatives on March 16.

Dr. Bostick discussed Assembly Bill No. 13, relating to narcotics. On motion duly made and seconded, it was voted to take no action on this measure.

10. *House of Delegates Resolutions:*

The Council discussed the resolutions referred to it by the 1959 House of Delegates or requiring some action by the Council. The following decisions were reached:

RESOLUTION

No. 7—Referred to Commission on Professional Welfare, through Committee on Insurance.

No. 12—Referred to Commission on Medical Services.

No. 13—Referred to Commission on Medical Services.

No. 14—Referred to Commission on Medical Services.

No. 15—Referred to Commission on Medical Services.

No. 17—Referred to Commission on Public Policy.

No. 19—Referred to Commission on Medical Services.

No. 26—Referred to Commission on Medical Services, liaison committee with Department of Social Welfare.

No. 27—Tabled.

No. 29—relative to exfoliative cytology—Referred to Commission on Community Health Services.

No. 35—Staff to send to county societies and resolution referred to Committee on Other Professions.

No. 37—Referred to Commission on Public Policy.

No. 45—Referred to Bureau of Research and Planning for its information, not action.

No. 46—Referred to Committee on Committee Nominations.

No. 49 and No. 50—Staff to send copies to Blue Cross plans, C.P.S. and Health Insurance Council, with request that coverage for services of assistant surgeon be provided.

No. 53—Referred to Committee on Legislation for consideration and framing of suitable legislation which would be brought back to the Council.

No. 58—Referred to Committee on Postgraduate Study for study and report back to the Council.

No. 63—Referred to Commission on Community Health Services.

No. 65—Referred to Committee on Legislation and Commission on Medical Services.

No. 70—Referred to Commission on Public Policy and to Committee on Committee Nominations.

No. 72—Staff to refer to Blue Cross, Blue Shield and Health Insurance Council.

No. 74—Staff to implement.

11. *Finance Committee:*

Dr. Heron, chairman of the Finance Committee, presented a report on bank balances, status of loans, etc., as of March 11, 1959. Report ordered filed.

Discussion was held on a request for a loan by Physicians' Benevolence Fund, Inc. It was agreed to consider this further at a later meeting.

12. *Commission on Medical Services:*

(a) Councilor Harrington, as chairman of the liaison committee with the State Department of Social Welfare, reported on changes in the regulations governing the prescribing of drugs to welfare patients.

On motion duly made and seconded, it was voted to congratulate Mr. George Wyman, recently resigned as Director of the Department of Social Welfare, on his new post with the federal government.

(b) A request of the State Department of Public Health for review of a new set of instructions for the treatment of rabies was reviewed and, on order duly made and seconded, was referred to the Commission on Public Health for study and report back to the Council.

13. *Governor's Conference on Traffic Safety:*

Dr. Bostick reported that C.M.A. representation on the Governor's Conference on Traffic Safety had been requested. On motion duly made and seconded, it was voted to refer this to the Committee on Industrial Health.

14. *Commission on Medical Education:*

Dr. Rosenow presented the new format of *Medical Dates Bulletin* and reported that a pharmaceutical firm had agreed to subsidize the publication of this bulletin for general mailings to the membership each six months and a restricted mailing to medical schools, hospitals and others every two months.

15. *Staff Report:*

Mr. Hunton requested further information on the proposal that commission and committee reports be recorded on magnetic tape for members of the Council. On motion duly made and seconded, it was voted that such reports not be put on tape but be reproduced and augmented by a summary sheet.

Mr. Hassard advised that the staff had suggested that meetings between staff and county society executives and members of the Conference of Local Health Officers be held annually at the time of the Annual Session. On motion duly made and seconded, it was voted to approve this suggestion.

Mr. Hassard also read to the Council the report adopted by the Medical Executives Conference, covering the composition of the conference and its operating procedures.

16. *State Department of Mental Hygiene:*

Dr. Marshall Porter reported that Dr. Daniel Blain, newly appointed Director of the Department of Mental Hygiene, would plan to attend future Council meetings or to be represented at them. He also reported that the department's budget for the 1959-1960 fiscal year had been increased and that

a large part of the increase would be used for professional education.

17. *California Physicians' Service:*

Dr. Heron presented a progress report on the activities of California Physicians' Service, including the proposed new program for older citizens.

18. *Public Relations:*

A request from the San Francisco Medical Society for support of a television program was reviewed and referred to the staff for consideration and report.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:45 p.m.

DONALD D. LUM, M.D., *Chairman*
JOHN HUNTON, *Acting Secretary*

In Memoriam

BOWNS, WILLIAM JAMES, JR. Died in Sacramento, March 26, 1959, aged 44, of heart disease. Graduate of University of Southern California School of Medicine, Los Angeles, 1956. Licensed in California in 1957. Doctor Bowns was a member of the Sacramento Society for Medical Improvement.

✣

BOYCE, LEE. Died in San Diego, March 12, 1959, aged 78. Graduate of Jefferson Medical College of Philadelphia, Pennsylvania, 1903. Licensed in California in 1919. Doctor Boyce was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

BRANDENBURG, KENNETH C. Died in Long Beach, March 10, 1959, aged 59. Graduate of University of Illinois, College of Medicine, Chicago, Illinois, 1926. Licensed in California in 1930. Doctor Brandenburg was a member of the Los Angeles County Medical Association.

✣

CALVERT, EDWARD HARRISON. Died in El Cajon, March 19, 1959, aged 70. Graduate of Ohio State University College of Medicine, Columbus, 1927. Licensed in California in 1936. Doctor Calvert was a member of the San Diego County Medical Society.

✣

CLARK, IRA JOSEPH. Died March 5, 1959, aged 83. Graduate of Denver and Gross College of Medicine, Colorado, 1908. Licensed in California in 1912. Doctor Clark was a retired member of the San Diego County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

EDISON, EARL MAYNARD. Died in Monterey Park, February 20, 1959, aged 49, of heart disease. Graduate of Northwestern University Medical School, Chicago, Illinois, 1937. Licensed in California in 1945. Doctor Edison was a member of the Los Angeles County Medical Association.

✣

EVERINGHAM, SUMNER. Died in Oakland, March 4, 1959, aged 73, of cerebral bemorrhage and myelofibrosis with thrombocytopenia and anemia. Graduate of Columbia University College of Physicians and Surgeons, New York, 1910. Licensed in California in 1919. Doctor Everingham was a member of the Alameda-Contra Costa Medical Association.

GIOVINCO, JOSEPH BIVONA. Died in San Francisco, March 20, 1959, of heart disease. Graduate of George Washington University School of Medicine, Washington, District of Columbia, 1924. Licensed in California in 1925. Doctor Giovinco was a member of the San Francisco Medical Society.

✣

HERZOG, GEORGE K., SR. Died in San Francisco, March 16, 1959, aged 80, of complications from a fall in which his hip was broken. Graduate of Cooper Medical College, San Francisco, 1901. Licensed in California in 1901. Doctor Herzog was a retired member of the San Francisco Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✣

JEANS, HOWARD S. Died in Lynwood, February 25, 1959, aged 41. Graduate of George Washington University School of Medicine, Washington, District of Columbia, 1943. Licensed in California in 1944. Doctor Jeans was a member of the Los Angeles County Medical Association.

✣

LEACH, WILLIAM OTTO. Died in Glendale, March 8, 1959, aged 82. Graduate of Wisconsin College of Physicians and Surgeons, Milwaukee, Wisconsin, 1908. Licensed in California in 1923. Doctor Leach was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

MCCLEAVE, THOMAS CROOKE. Died in Berkeley, March 11, 1959, aged 86, of cerebral thrombosis and arteriosclerotic cardiovascular disease. Graduate of Cooper Medical College, San Francisco, 1896. Licensed in California in 1896. Doctor McCleave was a retired member of the Alameda-Contra Costa Medical Association and the California Medical Association, and an associate member of the American Medical Association.

✣

MCGUIRE, THOMAS EDWARD. Died March 16, 1959, aged 77. Graduate of Maryland Medical College, Baltimore, 1904. Licensed in California in 1922. Doctor McGuire was a member of the Los Angeles County Medical Association.

✣

NEWSON, HOWARD E. Died in San Anselmo, March 21, 1959, aged 65, of a coronary occlusion. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1926. Licensed in California in 1926. Doctor Newson was a member of the San Francisco Medical Society.

NINTH ANNUAL
REGIONAL POSTGRADUATE INSTITUTE
NORTH COAST COUNTIES

Presented by University of California School of Medicine at Los Angeles, Thomas H. Sternberg, M.D., Assistant Dean for Continuing Education in Medicine and Health Sciences, and California Medical Association Committee on Postgraduate Activities.

Hoberg's Resort, Lake County

June 5 and 6, 1959

PROGRAM

FRIDAY, JUNE 5, 1959

9:00-9:30 a.m.—**Office Anesthesiology**—John B. Dillon, M.D.

9:30-10:00 a.m.—**Emotional Problems in Office Practice**—Frank F. Tallman, M.D.

10:15-10:45 a.m.—**Principles of Minor Surgical Procedures**—Franklin L. Ashley, M.D.

10:45-12:00 noon—**Three Panel Symposia** (you may go to one of your choice):

Panel 1: **Treatment of Psychocutaneous Problems**

Panel 2: **Anesthesia for Children and the Aged**

Panel 3: **Modern Prenatal Care**

2:00-2:30 p.m.—**Toxemia of Pregnancy**—Nicholas Assali, M.D.

2:30-3:00 p.m.—**Functional Uterine Bleeding**—J. G. Moore, M.D.

3:15-3:45 p.m.—**Sinusitis: Its Diagnosis, Complications and Treatment**—Jack H. Seltsam, M.D., D.D.S.

3:45-5:00 p.m.—**Three Panel Symposia** (you may go to one of your choice):

Panel 1: **General Problems in Management of Anesthesia for Head and Neck Surgery**

Panel 2: **Well Baby Live Clinic**

Panel 3: **Demonstrations of Minor Surgical Procedures, Utilizing Pigs**

6:00 p.m.—Cocktail Hour—Compliments of Hoberg's Resort

7:00 p.m.—Institute Banquet—Dancing

SATURDAY, JUNE 6, 1959

9:00-9:45 a.m.—**Ophthalmological Problems in Medical Practice**—Bradley Straatsma, M.D.

9:45-10:45 a.m.—**Otitis Media and Otitis Externa: Review of Recent Developments**—Bruce V. Leamer, M.D.

DESCRIPTION OF PROGRAM: In addition to didactic lectures there will be choices of special concurrent Panel Symposia during each half-day session where physicians will have the opportunity of working in small groups. Babies of various ages will be studied during the Well Baby Clinics. Demonstration of Minor Surgical Procedures (utilizing pigs) will be limited to small groups. Sign-up sheets will be available at the Registration Desk. Every effort will be made, however, to schedule additional sections if needed.

10:30-11:00 a.m.—**New Virus Diseases**—John M. Adams, M.D.

11:00-12:00 noon—**Three Panel Symposia** (you may go to one of your choice):

Panel 1: **Well Baby Live Clinic**

Panel 2: **Skin Tumor Clinic**

Panel 3: **Prerequisites and Hazards of Anesthesia**

2:00-2:30 p.m.—**Clinical Application of Steroids in Medical Practice**—Carl Pearson, M.D.

2:30-3:00 p.m.—**Differential Diagnosis of Arthritis**—Melvin H. Levin, M.D.

3:15-3:45 p.m.—**Use of Antihistamines, Tranquilizers and Antipruritics in Diseases of the Skin**—Paul LeVan, M.D.

3:45-5:00 p.m.—**Three Panel Symposia** (you may go to one of your choice):

Panel 1: **Demonstration of Minor Surgical Procedures, Utilizing Pigs**

Panel 2: **Arthritis and Connective Tissue Disease**

Panel 3: **Hemorrhagic Complications of Pregnancy**

Other Special Events:

1. **Medical Motion Pictures**
2. **Scientific Exhibits**

HOST: Sonoma County Medical Society . . . **REGIONAL CHAIRMAN:** R. L. Zieber, M.D., Montgomery Drive and Sotoyome, Santa Rosa. **Institute Fee: $25.00.** For additional information, contact Postgraduate Activities office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5. **All California Medical Association members and their families are cordially invited to attend.**

Annual Meeting

Ambassador Hotel

LOS ANGELES

February 21 to 24, 1960

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) no later than August 21, 1959.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association no later than September 1, 1959. (No exhibit shown in 1959, and no individual who had an exhibit at the 1959 session, will be eligible until 1961.)

Medical Motion Pictures

The daytime Film Symposiums which proved so popular during the 1959 sessions will be continued in 1960. Evening film programs will be planned for doctors, their wives, nurses and ancillary personnel.

Authors desiring to show films should send their applications to Paul D. Foster, M.D., California Medical Association, 2975 Wilshire Blvd., Los Angeles 5. All authors are urged to be present at the time of showing as there will be time allotted for discussion and questions from the audience after each film.

Deadline is October 1, 1959.

PLANNING MAKES PERFECT
AN EARLY START HELPS

SECRETARIES OF SCIENTIFIC SECTIONS

ALLERGY **Hyman Miller**
201 South Lasky Drive, Beverly Hills

ANESTHESIOLOGY **Roger W. Ridley**
5914 Birch Street, Riverside

DERMATOLOGY AND SYPHILOLOGY . **Edward L. Laden**
301 Narth Prairie Avenue, Inglewood

EAR, NOSE AND THROAT . . . **Heinrich W. Kohlmoos**
426 17th Street, Oakland 12

EYE **Earle H. McBain**
1530 Fifth Avenue, Son Rafael

GENERAL PRACTICE **Floyd K. Anderson**
1233 North Vermont, Los Angeles 29

GENERAL SURGERY **Philip R. Westdahl**
490 Post Street, Son Froncisco 2

INDUSTRIAL MEDICINE AND SURGERY . **Edward J. Zaik**
740 South Olive Street, Los Angeles 14

INTERNAL MEDICINE **Charles D. Armstrong**
1111 University Drive, Menlo Pork

OBSTETRICS AND GYNECOLOGY . **John C. McDermott**
2010 Wilshire Boulevard, Los Angeles 57

ORTHOPEDICS **Carl E. Horn**
2901 Copitol Avenue, Sacramento 16

PATHOLOGY AND BACTERIOLOGY . . **Robert L. Dennis**
675 East Sonto Clora Street, San Jose 12

PEDIATRICS **James L. Dennis**
5105 Dover Street, Ookland 9

PHYSICAL MEDICINE **Joseph E. Maschmeyer**
1720 Braaklyn Avenue, Los Angeles 33

PSYCHIATRY AND NEUROLOGY . . **Leon J. Whitsell**
909 Hyde Street, Son Francisco 9

PUBLIC HEALTH **Merle E. Cosand**
316 Mountain View Avenue, San Bernardino

RADIOLOGY **Frank C. Binkley**
635 East Unian Street, Posodeno 1

UROLOGY **Morrell E. Vecki**
450 Sutter Street, Son Froncisco 8

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

THERE ARE striking differences between the various ethnic groups in California for cancer of certain sites, according to a soon to be published department report, "Cancer in California."

Whether racial or socio-economic factors determine these differences is not known. The Negro rate for cancer of the cervix is appreciably higher than that for the white group. In contrast, the breast cancer mortality among white women is nearly twice that of the Negro women.

The actual number of deaths among Chinese due to cancer of the nasopharynx, stomach and liver is several times greater than would be expected (based on cancer death rates for selected sites in the total population). Among the Japanese, deaths due to stomach cancer far exceed general actuarial expectance. Mexican-born women show a three-fold greater rate of lung cancer deaths than do other women in the state.

The report provides information about the state's population, cancer deaths and illness, the concentration of certain forms of the disease in particular segments of the population, and the extent of survival among those affected by the disease.

* * *

Thirty-nine cases of paralytic poliomyelitis were reported during the period January 1 to April 4, as against 23 cases during the same period last year. Of these 39 cases, 18 were reported from Los Angeles, seven from San Francisco and seven from the 16 Central Valley counties.

The 1959 cases follow the same pattern with regard to age groups as the 235 cases of 1958. with 40 per cent occurring in the under five-year age group and 30 per cent in persons over 20 years. Approximately 70 per cent of the cases occur in unvaccinated persons.

For the nation, 187 cases of paralytic poliomyelitis were reported for the period January 1 to March 28, as against 103 for the same period last year. In 1958 more than 3.000 persons were crippled and almost 200 lost their lives from poliomyelitis in the United States.

* * *

The department has been given a byproduct material license by the Atomic Energy Commission, which permits possession of one millicurie each of barium 140, cesium 137, iodine 131, strontium 90, thallium 204, yttrium 90 and mixed fission products.

These materials will be used in the Sanitation Laboratory for the evaluation of analytical techniques for the recovery of radioactive materials in air, water, food and soil, and for the preparation of radioactivity counting standards.

* * *

Severe smog episodes occurred in California again in 1958, according to a report on air pollution published by the Bureau of Air Sanitation.

The report contrasts the severe smog conditions of last year with the more favorable conditions of 1957 when air pollution seemed to be on the decrease throughout the state. The difference in levels between the two years was attributed chiefly to meteorological conditions.

Pointing out that weather conditions conducive to smog occurred over much of the year, the report said that "the experience in 1958 is a reminder that natural forces play an important role in how frequent and how severe our smog episodes will be and that control programs must become effective enough to offset weather conditions which contribute to air pollution attacks."

* * *

A course for physicians on performance of the nalorphine test was scheduled for May 7 by the Postgraduate Division of the School of Medicine, University of Southern California. Because the course is an experiment in this field, and because it is hoped to actually demonstrate and give practice in the administration of the test, registration was limited to ten physicians.

If enough physicians are interested, additional courses may be scheduled. Physicians interested may communicate with the Postgraduate Division of the School of Medicine.

The course is divided into three two-hour sessions, as follows:

1. The Pharmacology of Addicting Drugs and of Nalorphine—Prof. John Leyden Webb, head of the department of pharmacology.

2. Facts and Theories of Narcotic Addiction and Withdrawal—Clinton H. Thienes, M.D., visiting professor of pharmacology.

3. Indications for, and Techniques, Effects and Dangers of the Nalorphine Test for Narcotic Consumption—Charles Hurley, M.D., assistant physician, Pasadena Emergency Hospital.

WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

DURING the past few years several county auxiliaries have reported that many of their members have felt discouraged because of what they consider a lack of interest and understanding by their county medical societies. Where this attitude exists, it would seem to be in direct contrast to the attitude of the California Medical Association Council toward the Auxiliary.

On May 8, 1959, the Woman's Auxiliary to the California Medical Association was 30 years old.

Following is the When, Where and Why of the formation of the Auxiliary.

In 1928 Mrs. John O. McReynolds of Dallas, Texas, president of the Woman's Auxiliary to the American Medical Association, appeared before the Council of the California Medical Association and urged the formation of a California Auxiliary. Convinced of its value, the Council advocated the formation of an Auxiliary and referred the matter to a reference committee with Dr. O. D. Hamlin of Oakland as Chairman. After many meetings and much work of the committee, consisting of Doctors George H. Kress, Edward M. Pallette and Mr. Hartley Peart, a set of rules was formulated for the organizing and regulating of county auxiliaries. This syllabus was sent out from the central office of the California Medical Association prior to the organization of the State Auxiliary at Coronado on May 7, 1929, at a meeting held under the sponsorship and at the instruction of the Council of the California Medical Association.

On May 8, 1929, Dr. William Duffield of Los Angeles, at the request of the California Medical Association, called together a group of physicians' wives who were present at the convention of the C.M.A. being held in Coronado. To this small group were presented a few of the many problems confronting the medical profession, with an explanation of the efforts being made in some states to solve these problems through the medium of auxiliaries to medical societies. At this time the first state officers were elected: President, Mrs. Henry Rogers, Petaluma; vice-president, Mrs. W. H. Geistweit, San Francisco; second vice-president, Mrs. J. H. Shepard, San Jose; secretary and treasurer, Mrs. Clara Cushman, Santa Ana.

This simple gesture brought into being the Woman's Auxiliary to the California Medical Association.

There were forty-six charter members at this meeting, representing seventeen counties—Alameda, Contra Costa, Fresno, Los Angeles, Marin, Mariposa, Napa, Orange, Placer, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, Santa Clara and Sonoma.

Ten county auxiliaries were organized during the first year—Alameda, Contra Costa, Los Angeles, Monterey, Napa, Orange, San Bernardino, San Diego, Santa Barbara and Sonoma. In April 1930 there was a total membership of 472.

There are 58 counties in the State and 50 of these are organized into 40 county medical societies with a membership today of 16,700, including 561 associate members. In the Woman's Auxiliary we have 42 counties organized into 34 county auxiliaries. Three of these county auxiliaries have branch auxiliaries, Los Angeles five, and Alameda and Santa Clara each one. Five of the unorganized counties are represented by eight members-at-large. These counties are Plumas, Madera, Yolo, Siskiyou and Mariposa. The total membership in the Auxiliary is 6,625, which includes 245 associate members.

Although we have made great progress in our membership in the past 30 years we have less than 50 per cent of our potential. I study our accomplishments of these past years and think of the great possibilities . . . if we had 100 per cent membership. We could achieve this goal with the help of all C.M.A. members.

I am happy to report that the California Medical Association Council further indicated its interest and belief in the need for the Auxiliary when it adopted the following Resolution on October 11, 1958:

WHEREAS, the Heller report recommended a closer liaison with the Woman's Auxiliary to the California Medical Association; and

WHEREAS, the special Council committee on the Heller report endorsed this recommendation and urged that the Auxiliary be made to feel more a part of the Association in its activities; and

WHEREAS, this recommendation was endorsed by the Council; now, therefore, be it

Resolved: That this Council urge all county medical societies to encourage the formation of countywide auxiliaries; and be it further

Resolved: That all physician members of the C.M.A. be encouraged to urge their wives' participation in the Auxiliary and its activities; and be it further

Resolved: That the annual reception honoring the President's wife also honor the President of the Woman's Auxiliary to the California Medical Association.

Our Auxiliary projects and activities are so varied that we offer something of interest for every physician's wife and an opportunity for her to assist organized medicine by serving in her community as an Auxiliary member.

MRS. THEODORE A. POSKA
President, Woman's Auxiliary to the California Medical Association

NEWS & NOTES

NATIONAL • STATE • COUNTY

KERN

Dr. William C. Buss, health officer of Kern County for the past 21 years, resigned that position early last month owing to ill health. Dr. William H. Coe is acting health officer.

LOS ANGELES

Dr. Roger O. Egeberg, medical director of Los Angeles County General Hospital, has been appointed county director of mental health services by the board of supervisors. In this capacity he will coordinate plans for the county's participation in mental health clinics for care of mental patients in their own community under the provisions of the Short-Doyle Act.

* * *

Grants totalling $64,189 to aid studies by six Los Angeles researchers into **various aspects of cancer** were announced recently by the California Division of the American Cancer Society. The grants and the projects were as follows:

To Dr. Irving Gordon of the University of Southern California School of Medicine, $20,635 for investigation of the possible role of virus infection in pulmonary cancer.

To Dr. Hans L. Falk, USC School of Medicine, $20,143 to continue a study of carcinogenic effect of certain chemicals found in polluted air.

To Drs. William Hartman and **William G. Clark** of the University of California School of Medicine at Los Angeles and the Veterans Administration, $13,891 for extension of a $46,000 five-year study of chemical compounds produced in tumors.

To Dr. Max S. Dunn of the UCLA Department of Chemistry, $8,484 for continuation of studies of effects of growth inhibitors on tumors.

To Dr. Ralph McKee of UCLA School of Medicine, $1,036 to supplement a previously awarded grant of $40,000 for a five-year investigation of the nature and action of large molecules in cancer cells.

* * *

The University of Southern California School of Medicine will offer another **Postgraduate Refresher Course in Hawaii** and on board the S. S. Lurline from July 29 through August 15, 1959, Dr. Phil R. Manning, director of the school's postgraduate division, announced recently.

In addition to the lectures, the announcement said, there will be workshops in electrocardiogram and x-ray interpretation as well as problems of water and electrolyte balance and the differential diagnosis of jaundice. During most hours, several programs run simultaneously so that the participating physician may choose the topics most suited to his needs.

Further information about the course may be obtained by writing to the Director of the Postgraduate Division, USC School of Medicine, 2025 Zonal Avenue, Los Angeles 33.

A donation of $800,000 for the construction in Santa Monica of a center for **study and treatment of both mentally retarded and emotionally disturbed children** has been made by the Joseph P. Kennedy, Jr., Memorial Foundation. The center is to have facilities for observation and treatment of some 900 patients a year. Dr. George M. Tarjan, superintendent of the Pacific State Hospital at Spadra, is collaborating on plans for the physical plant and its operation, it was announced.

The Kennedy Foundation was established by Joseph P. Kennedy, Sr., former United States ambassador to England, in memory of his son, who was killed during World War II.

* * *

Receipt of a gift of $93,000 from the Commonwealth Fund, New York, to be used for the furnishings of the basic sciences teaching building being built at its medical center by the University of Southern California was announced recently by Dr. Clayton G. Loosli, dean of the school.

SACRAMENTO

Dr. John G. Walsh of Sacramento was chosen president-elect of the American Academy of General Practice at the organization's convention in San Francisco in April. He will succeed to the presidency at the meeting next year. Last year Dr. Walsh, who is a member of the editorial board of CALIFORNIA MEDICINE, served as chairman of the American Academy's board of directors. He is a past president of the California Academy of General Practice.

SANTA BARBARA

Dr. James T. Case of Santa Barbara, who was for many years professor of radiology at Northwestern University School of Medicine, was presented with the Janeway Medal of the American Radium Society at the organization's 41st annual meeting, held at Hot Springs, Va., last month. Dr. Case delivered the annual Janeway Lecture. The medal, which honors late Dr. H. H. Janeway, pioneer radiation therapist, is presented annually to an outstanding physician or medical scientist.

GENERAL

Recent improvements in the diagnosis and in the treatment of patients with obstruction of the peripheral blood circulation will be highlighted at the annual **scientific sessions of the California Heart Association,** to be held at the Hotel Wilton, Long Beach, May 23. Dr. Henry Barcroft, professor of physiology, St. Thomas Hospital, London, will be a guest panelist at roundtable discussion of blood flow measurement.

The scientific program, scheduled from 9 o'clock in the morning to 4 in the afternoon, will include a review of recent research developments in the surgical treatment of strokes, treatment of pulmonary disorders, fluid balance, and factors influencing blood lipids.

The problem of heart disease and compensability under workman's compensation will be reviewed. Also on the program is a discussion on the relationship between trauma or strain and heart disease.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates of postgroduote educotion programs ond the meetings of vorious medicol orgonizotions in Californio is supplied by the Committee on Postgroduote Activities of the Californio Medicol Associotion. In order thot they moy be listed here, pleose send communicotions reloting to your future medicol or surgicol programs to: Mrs. Margoret H. Griffith, Director, Postgroduote Activities, Californio Medicol Associotion, 2975 Wilshire Boulevord, Los Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Fetal Electrocardiography. Friday and Saturday, June 5 and 6. Twelve hours. Fee: $40.00.

Workshop for Food Service Workers—Equipment Maintenance. Monday and Tuesday, June 15 and 16. Twelve hours. Fee: $20.00 (includes two lunches).

Office Urology. Wednesday, June 17. Six hours. Fee: $30.00.

Surgical Technique Utilizing the Isolated Intestinal Segment in Urological Procedures. Thursday, June 18. Seven hours. Fee: $150.00.†

Eighth Annual Symposium in Clinical Laboratory Technology. Saturday and Sunday, June 20 and 21. Twelve hours. Fee: $20.00 (includes one lunch).

Dissection of the Thorax, Abdomen and Pelvis. Wednesday and Thursday, June 24 and 25. Fourteen hours. Fee: $80.00.†

Dissection of the Extremities. Friday, June 26. Seven hours. Fee: $40.00.†

Hand Surgery. Saturday and Sunday, June 27 and 28. Twelve hours. Lecture and laboratory, $60.00. Lecture only, $35.00.

Clinical Neurology. Wednesday, July 8 to August 12. Thirty-six hours. Fee: $100.00.

Infertility. Friday and Saturday, July 24 and 25. Twelve hours. Fee: $60.00.

The Impact of Surgery on Anesthesia. Wednesday, Thursday and Friday, August 5, 6 and 7. Eighteen hours. Fee: $60.00.

Common Problems of the Foot. Friday and Saturday, September 11 and 12. Nine hours. Fee: $35.00.

Three Summer Seminars at University of California Residential Conference Center, Lake Arrowhead (all fees at Lake Arrowhead include room and board):

Pediatric Cardiology. Sunday through Wednesday, August 16 through 19. Fifteen hours. Fee: $137.50.† Guest speaker: John Lind, M.D., Stockholm, Sweden.

Emotional Problems in Office Practice. Wednesday through Sunday, August 19 through 23. Fifteen hours. Fee: $150.00.†

Seminars in Internal Medicine. Sunday through Wednesday, August 23 through 26. Fifteen hours. Fee: $137.50.†

Clinical Traineeships—Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

† Limited enrollment.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Practical Aspects in the Management and Treatment of Cardiovascular Disease. Saturday, Sunday and Monday, May 16, 17 and 18. Twenty-one hours. Fee: $35.00.

Secondary Glaucoma. Thursday, Friday and Saturday, May 21, 22 and 23. Twenty hours. Fee: $75.00.

Pediatrics. Wednesday through Saturday, June 17 through 20. Twenty-eight hours. Fee: $20.00 per day.

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Assistant Dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

Contact: Mrs. Alice Crouch, Postgraduate Secretary, Stanford Medical School, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Each session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC School of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14. (As a time and money saver, round trip air travel is also possible July 29 to August 10.)

Intensive Review of Internal Medicine. Monday through Friday, September 21 through October 2. 9 to 12:30 a.m.*

Alumni Homecoming Course. Recent Advances in Medicine. Thursday and Friday, November 5 and 6. Fee: $50.00.

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

* Fees to be announced.

COLLEGE OF MEDICAL EVANGELISTS

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

For information contact: G. E. Norwood, M.D., assistant dean and chairman, Division of Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33. ANgelus 9-7241, Ext. 214.

CALIFORNIA MEDICAL ASSOCIATION POSTGRADUATE COURSES

POSTGRADUATE INSTITUTES

North Coast Counties in cooperation with UCLA School of Medicine, June 5 and 6, Hoberg's Ranch, Lake County. Chairman: Lee Zieber, M.D., 1177 Montgomery Dr., Santa Rosa.

Sacramento Valley Counties in cooperation with University of Southern California School of Medicine, June 25 and 26, Tahoe Tavern, Lake Tahoe. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento.

* * *

Audio-Digest Foundation, a nonprofit subsidiary of the C.M.A., offers (on a subscription basis) a series of six different hour-long tape recordings covering general practice, surgery, internal medicine, obstetrics and gynecology, pediatrics and anesthesiology. Designed to keep physicians posted on what is new and important in their respective fields, these programs survey current national and international literature of interest and contain selected highlights of on-the-spot recordings of national scientific meetings, panel discussions, symposia, and individual lectures. For information contact Mr. Claron L. Oakley, Editor, 1919 Wilshire Blvd., Los Angeles 57, HUbbard 3-3451.

Medical Dates Bulletin

MAY MEETINGS

American Urological Association, Western Section, 35th Annual Convention, May 17 through 21, Monterey Fairgrounds. *Contact:* James Ownby, Jr., M.D., 576 Sutter Street, San Francisco, or Monterey Peninsula Convention Bureau, Box 489, Monterey.

Los Angeles Society of Neurology and Psychiatry meeting, Wednesday, May 20, 1959, 8:00 p.m., Los Angeles County Medical Association Auditorium. Program: "Impressions of Soviet Science" by Dr. H. W. Magoun. *Contact:* Robert P. Sedgwick, M.D., secretary-treasurer, 2010 Wilshire Blvd., Los Angeles 57.

The Nevada Academy of General Practice Annual Meeting, May 21 through 23, Riverside Hotel, Reno. Program by University of Southern California School of Medicine. *Contact:* Roy M. Peters, M.D., chairman, 475 S. Arlington Avenue, Reno, Nevada.

California Heart Association Annual Meeting, May 22 through May 24, 1959. Scientific Session and Directors Meeting, Lafayette Hotel, Long Beach. *Contact:* J. Keith Thwaites, executive director, 1428 Bush Street, San Francisco 9.

SUMMER AND FALL MEETINGS

Western Branch, American Public Health Association Annual Meeting. June 2 through 5, Sheraton-Palace Hotel, San Francisco. *Contact:* Mrs. L. Amy Darter, secretary-treasurer, 2151 Berkeley Way, Berkeley 4.

Nevada State Medical Association, Annual Session, jointly with Reno Surgical Society, August 19 through 22, Mapes Hotel, Reno. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, executive secretary, 1309 Seventh Avenue, Seattle, Washington.

Oregon State Medical Society Annual Meeting, September 23 through 25, Medford, Oregon. *Contact:* Mr. Roscoe K. Miller, executive secretary, 1115 S.W. Taylor St., Portland 5, Oregon.

San Francisco Heart Association 29th Annual Postgraduate Symposium on Heart Disease. September 30, October 1 and 2, 9 a.m. to 5 p.m. daily, St. Francis Hotel, San Francisco. *Contact:* Lawrence I. Kramer, Jr., executive director, 259 Geary Street, San Francisco 2. YUkon 2-5753.

Western Industrial Medical Association, Inc. 18th Annual Meeting, held in conjunction with Third Western Industrial Health Conference, all day October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

California Society of Internal Medicine Annual Meeting, October 2 through 4, Miramar Hotel, Santa Barbara. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Clyde C. Greene, Jr., M.D., secretary-treasurer, 350 Post Street, San Francisco 8.

California League for Nursing Annual Meeting, October 8 through October 10, U. S. Grant Hotel, San Diego. *Contact:* Ruth I. Jorgensen, general director, Room 202, 465 Post St., San Francisco 2.

California Academy of General Practice 11th Annual Scientific Assembly, October 11 through 14, 9:00 a.m. to 5:00 p.m., Hotel Statler, Los Angeles. *Contact:* William W. Rogers, executive secretary, 461 Market Street, San Francisco.

American Academy for Cerebral Palsy Annual Meeting, November 30 through December 2, Statler Hotel, Los Angeles. *Contact:* Margaret H. Jones, M.D., local arrangements chairman, associate professor of pediatrics, UCLA School of Medicine, Los Angeles 24.

1960 MEETINGS

Research Study Club of Los Angeles Midwinter Clinical Conference, third week of January, Ambassador Hotel, Los Angeles. *Contact:* Norman Jesberg, M.D., secretary, 500 S. Lucas Avenue, Los Angeles 17.

California Medical Association Annual Meeting, February 21 through 24, Ambassador Hotel, Los Angeles. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

Southwestern Pediatric Society Spring Lecture Series, March 1 and 2, Statler Hotel, Los Angeles. *Contact:* Wendell Severy, M.D., program chairman, 11633 San Vicente Blvd., Los Angeles 49.

INFORMATION

What Is the California Medical Assistants' Association?

DOCTORS, are you satisfied with your office medical assistant?

Is she taking advantage of all opportunities to improve her knowledge and education, the better to serve the medical profession and the public?

Is she a good public relations representative for the medical profession?

Does she belong to a medical assistants' organization?

Are you aware that such an organization exists?

There is such an organization. In California it is endorsed by the California Medical Association, and its name is California Medical Assistants' Association of California. It began in 1952 when medical assistants in Northern California joined to form the California Medical Assistants Society. In 1953 a similar group was started in the southern part of the state, and soon afterward correspondence between the two groups began. Representatives from both sections attended a meeting in Kansas City in 1955 to organize a national association. The two California groups merged in 1956 and the new statewide organization was incorporated on March 17, 1957. Since then many new component chapters have come into the state organization; at present 35 county organizations with a total of over 1,900 members are represented.

The organization has the full support and approval of the California Medical Association and the American Medical Association. Patterned after medical societies, it is composed of county chapters which make up the state organization, which in turn is a component of a national association.

The American Association of Medical Assistants was endorsed by the American Medical Association at its 1956 meeting in Seattle. At present there are 20 affiliated state units and over 6,500 members. California led in number of members in 1958 with 1,892. There are ten physician advisors, one appointed by the A.M.A. from its Board of Trustees. Dr. Steward H. Smith of San Diego is the advisor from California.

The first annual convention, following two organizational meetings in the Midwest, was held in San Francisco in October, 1957. At the 1958 convention held in Chicago, registration totaled 472. The A.M.A. sponsored a tour of its headquarters and a program for those who attended. The association now has an office at 510 Dearborn Street in Chicago, just across the street from A.M.A. headquarters. An executive secretary is to be employed this year. The 1959 convention will be held October 16-18 in Philadelphia.

Information to acquaint physicians with the assistants' association was provided in a brochure, "WHO, WHAT, WHEN, WHERE, WHY of the California Medical Assistants' Association," that was distributed at an annual meeting of the California Medical Association. Excerpts from it follow:

WHO . . .

We are the women who assist the doctors of California. We are the nurses, receptionists, secretaries, bookkeepers and technicians. We handle the business and technical details of the doctors' offices, thereby leaving the physician free to practice medicine; to serve his patients with the skill, care and judgment which he has acquired. The Medical Assistants' respect for the Profession makes them strive for better public relations; to be ethical in all dealings with patients and in their participation in the civic affairs of the community.

WHAT . . .

In their efforts to elevate the standards of procedure in doctors' offices and clinics they have joined forces with other county organizations to form a State Association. *It is not, and shall never become, a trade union or collective bargaining agency.* Its purpose is a sincere and cooperative interchange of knowledge and ideas on how to improve public relations in medical endeavors.

WHEN . . .

The C.M.A.A. began to take effect in 1952, and after a merger of north and south groups, it became incorporated on March 17, 1957.

WHERE . . .

Each member is a member of her own local county organization which is endorsed by its own county medical society. The California Medical Association approves of a statewide organization and provides an advisory committee as do the local county societies.

WHY . . .

The purposes of this association are:

To bring members into a closer relationship, thereby promoting mutual understanding and a spirit of cooperation between the members;

To promote the interests of the members and to secure better public relations;

To provide a means whereby all Medical Secretaries and Assistants may become associated together and work toward the common good of the medical profession;

To enlarge the opportunities of the members through education, scientific and business training, and the participation in vocational activities;

In general, to promote the highest standards of endeavor among Medical Assistants.

Already educational programs have been set up by C.M.A.A. In 1958 a series of five educational symposia were held at various widely separated places in the state so that all members would have an opportunity to attend at least one. These were held on Sundays (a medical assistant's only sure day off) in the months of September and October, in the following cities: Chico, Burbank, Berkeley, San Diego, and Bakersfield. They were very well received. A total of about 800 medical assistants attended. A registration fee of one dollar for each session was charged. Meetings were held in hospital auditoriums, colleges or hotels, members paying for their own luncheons. Doctors and other speakers gave unselfishly of their time to instruct the medical assistants. The symposia will be repeated in 1959, and all medical assistants, whether members or not, are urged to attend. Details will be forthcoming.

Most local chapters have educational programs at their monthly meetings. Physician speakers are most popular; medical films are shown; and office procedures are explained. Other programs feature public health, Community Chest organizations, rehabilitation, telephone etiquette, good grooming, and occasional dinner meetings. In addition to educational speakers at regular meetings, most chapters have weekly educational workshops or medical lectures. In many of the large cities medical assistant courses are sponsored by adult education boards of the public school systems. Some state colleges and junior colleges have regular courses suitable for medical assistants, a few being taught by C.M.A.A. members.

Each chapter has one or more philanthropic projects. One chapter supplied the furnishings for a hospital room at a cost of about $1,500. Others send underprivileged children to summer camps or sponsor needy families, and some are offering scholarships for future medical secretaries and student nurses. Methods of fund raising vary from rummage sales to fashion shows and dinners.

On several political issues of mutual interest, the Assistants' Association has recorded its support or its opposition along with that of organized medicine. A legislative committee, with a chairman in Sacramento, works with the Public Health League of California and keeps members of C.M.A.A. informed of proposed legislation of interest to the medical profession.

In another area of influence, when urged to do so by the California Medical Association, members of the Assistants' Association called their employers' attention to the importance of filling out and returning the Relative Value Study questionnaire.

New officers of the C.M.A.A., who took office at the annual convention in Pasadena, April 18, are: President, Mrs. Anne Reece, Porterville; president-elect, Mrs. Lauretta Cole, Santa Barbara; first vice-president, Mrs. Helen Anderson, Encinitas; second vice-president, Mrs. Helen McDonald, Oakland; treasurer, Mrs. Maryanne Neill, San Francisco; recording secretary, Miss Nina Rudolph, San Francisco, and corresponding secretary, Miss Emmy Kibler, Tulare County.

The Advisory Board for Internal Affairs is composed of three physicians and two C.M.A.A. members: Steward H. Smith, M.D., San Diego; Vincent M. Dungan, M.D., Visalia; Leon O. Desimone, M.D., Los Angeles; Mrs. Mary Kinn, Orange County, and Mrs. Elisabeth Massey, San Diego.

April has been designated the month for a C.M.A.A. membership drive. Many county medical societies are dedicating their April bulletins to medical assistants, and each medical assistant society is dedicating its own bulletin and planning special programs for prospective members. Doctors are invited to attend local and state meetings to learn more about the organization, and above all are urged to send their medical assistants. For any additional information you may contact Mrs. Kathryn Allen, membership chairman, 14407 Califa, Van Nuys, or, any of the above listed officers.

As to what the California Medical Assistants' Association has to offer its members:

1. Membership in local, state, and national organizations. Association with people in their own field. Regular monthly meetings and social gatherings within the local organization. Annual state and national conventions.

2. Information. Most local chapters have bulletins published monthly. State and national bulletins are published quarterly.

3. Education on local, state and national levels, at little or no expense to members.

4. Insurance. Through the national organization a most comprehensive hospital, surgical, and salary replacement insurance program is offered, which cannot be equalled elsewhere.

5. A better future in the member's own field through the knowledge gained through association and educational programs. Eventual certification of medical assistants is planned.

M.D. QUOTES ABOUT MEDICAL ASSISTANTS

"The American Medical Association has faith in you and it will continue to assist you in developing good educational programs and in winning wider

acceptance among the medical profession. . . . The American Medical Association is your ally in our efforts to improve health and fight disease. There never was a more worthwhile campaign. Best wishes to you."—Dr. F. J. L. Blasingame, *Vice-President and General Manager*, American Medical Association.

"The American Association of Medical Assistants is doing a job that would do justice to an organization ten times its size."—Dr. Morris Fishbein.

"The American Association of Medical Assistants has accomplished much, but there is a long road ahead—with a brilliant future. You have won the confidence of the American Physician. . . . Because of A.A.M.A., what has been a common occupation is developing into an uncommon profession."—Dr. Fred Sternagel, *A.A.M.A. Advisor*, Iowa.

"Your many outstanding contributions to the progress of medical treatment and research merit the gratitude of all Californians."—Goodwin J. Knight, *former Governor of California*, in a telegram to A.A.M.A., Annual Convention, San Francisco, 1957.

"Your code of ethics and obligation in acceptance of membership in your organization indicate that your purposes are of the highest caliber. . . . I should say, personally, that that doctor is fortunate, indeed, who has an assistant who is earnestly following your written aims."—Dr. Herman A. Iverson, *Past President*, Humboldt-Del Norte County Medical Society.

"Your jobs are the most important position in the entire private practice of medicine. Few of us doctors keep in mind the importance of our medical assistants who have to keep our offices running smoothly and pleasantly until something happens to keep them from the office—that is a real disaster." —From "The Perfect Medical Assistant," Dr. James B. Graeser, C.M.A.A. Symposium, Hotel Claremont, Berkeley, September 28, 1958.

"The doctors in Santa Clara County should consider themselves fortunate that there is here an active chapter of the American Association of Medical Assistants. Theirs is a society dedicated *not* to ways and means of getting more pay or to improving their working conditions, but to ways of improving themselves so that they can do a better job for [physicians]. They are learning better public and patient relations, more efficient ways of getting their jobs done, and ways to help [physicians] better serve their patients. We should give all the encouragement we can, not only for our aides to join this Society of Medical Assistants but to attend meetings. This encouragement should not only be in the form of persuasion or suggestions, but also financial. Pay her initiation fee, pay her yearly dues, and also for her meals that go along with their monthly meetings. The two, three, or even four dollars a month will not mean nearly as much to you as it does to her; and, besides, inasmuch as it is for the betterment of our offices, it should be considered an office expense."—Dr. Leland B. Blanchard, San Jose, California.

New Mental Hygiene Director

Dr. Daniel Blain, nationally known psychiatrist and administrator in the field of mental health, on March 1 took the reins as director of California's Department of Mental Hygiene following announcement of his appointment as head of the state's largest agency by Governor Edmund G. Brown.

For ten years medical director of the American Psychiatric Association, Dr. Blain left that post last year to become professor of clinical psychiatry at the University of Pennsylvania in Philadelphia, and to serve as director of mental health training and research for the Western Interstate Commission for Higher Education (WICHE). He remained active with APA as director of its program for recruitment, distribution and utilization of psychiatrists. He also serves as a consultant to the Veterans Administration. At the time of his appointment, Dr. Blain had just completed a four-month tour of 14 western states to examine their programs for WICHE in line with efforts of its Council on Mental Health Training and Research to establish interstate cooperative programs for use of training and research facilities.

Much the same type of cooperative use of California's facilities, involving public and private agencies and use of all community resources, was outlined by Dr. Blain on taking office as State Director of Mental Hygiene. He said his plans would rely heavily on prevention, research, and methods of obtaining and training more personnel in the psychiatric field.

Dr. Blain's rich background as a mental health administrator includes organization of psychiatric services in the Merchant Marine during World War II, and spearheading of the movement for reforms in veterans' psychiatric care as postwar chief of psychiatry for the Veterans Administration. He has also written numerous articles for professional publications. His choice as director, Governor Brown stated, was unanimous among an informal Governor's Advisory Committee made up of Dr. Frank Tallman, former mental hygiene director; Dr. Karl Bowman, professor emeritus of psychiatry at the University of California Medical School and former head of Langley Porter Neuropsychiatric Institute; and Superior Judge W. B. Neeley of Los Angeles.

Dr. Blain was born in China, the son of missionary parents. He graduated from Washington and Lee, then took his medical degree at Vanderbilt University. Married, he is father of a son who is also now a student at Washington and Lee. Dr. Blain's medical affiliations include certification in psychiatry by the American Board of Psychiatry and Neurology, fellowship in the American Psychiatric Association and the American College of Physicians, and membership in the American Medical Association, American Psychoanalytic Association, American Psychopathological Association, Inc., Association for Research in Nervous and Mental Disease, American Sociological Society, plus numerous consultative affiliations.

Medical Examinations—When Required by Law

THE 1957 California legislative session resulted in enactment of Senate Bill 1093 which substantially altered and broadened the discovery procedures in civil litigation. This legislation was modeled primarily upon the discovery rules in effect in the Federal Courts and became effective on January 1, 1958.

These discovery procedures are so new that their full impact has not, as yet, been fully realized by the public and the members of the bar. In some respects, the legislation will affect in one fashion or another the practice of medicine. This article will deal only with a restricted portion of this legislation related to the provisions for physical and mental examinations of people in civil litigation. The pertinent sections of the California Code of Civil Procedure are section 2032, which generally provides for the authority to require submission of a party to physical, mental or blood examination, and section 2034, which provides certain sanctions for failure to comply with an order of court.

Section 2032, in part, provides that, in an action in which the mental or physical condition or the blood relationship of a party is in controversy, the court may order the party to submit to a physical or mental or blood examination by a physician. The order may be made only for good cause shown and shall specify the time, place, manner, conditions and scope of the examination and the person or persons by whom it is to be made. If requested, the party causing the examination to be made shall deliver to the person examined or party to the action a copy of a detailed written report of the examining physician, setting out his findings and conclusions, and if a physician fails or refuses to make such a report, the court may exclude his testimony if offered at the trial. In this connection, it should be noted that in *Jorgensen* v. *Superior Court*, 163 ACA 589, the District Court of Appeal of the State of California held that there is no attorney-client privilege which would cloak the report and justify a refusal upon demand to deliver a copy to the other party in the action, or the person examined.

The court further stated that if such reports *were* privileged, that privilege would be waived by virtue of procuring the physician's examination upon which the report is based.

Section 2034 of the California Code of Civil Procedure, in part, provides that, if any party refuses to obey such an order, the court may make an order that the physical or mental or blood condition of the person sought to be examined shall be taken to be established for the purposes of the action in accordance with the claim of the party seeking the examination and an order refusing to allow the disobedient party from introducing evidence of the physical or mental or blood condition of the person sought to be examined. Although the code provides penalties for disobedience of the order, the usual contempt proceedings will also apply.

Prior to the adoption of the code sections, there was no express statute permitting or compelling a physical examination of a party by a physician. However, the courts, in several cases, held that a trial court could compel such examinations under other sections of the Code of Civil Procedure. As a practical matter, the parties often stipulated that such an examination be performed and this custom is still followed by attorneys.

The statute contains several safeguards for the litigants. It requires the party seeking the order for examination to make a motion with proper notice to all other parties and to the person to be examined. This assures a full and open hearing by the court which permits all individuals to present their arguments.

The notice of motion, a formal legal document giving the parties notice of the hearing, must specify the time, place, manner, conditions and scope of the examination and the person or persons by whom it is to be made. Any disagreements on these points can be stated at the hearing before the court.

The court, in the exercise of its power to order the examination would have due regard for the feelings of the person to be examined and the proprieties of the case, to the extent that the ends of justice will permit in any particular legal action.

The physician or surgeon chosen by the litigants or appointed by the court and undertaking to conduct the examination should follow closely the order of the court specifying the place, manner, condition and scope of the examination. (It should be noted, however, that in the majority of cases such examinations will be conducted pursuant to the stipulation

of the parties without the necessity for a court order.)

A physician performing such examinations should also keep in mind the necessity for detailed written reports setting forth his findings and conclusions. The code specifically provides that failure or refusal to make such a report will be sufficient grounds for excluding his testimony at the time of trial. Such a result might destroy the physician's usefulness to the persons requesting the examination.

The examinations performed by a physician are of extreme importance to all of the parties involved in the litigation. It behooves the physician, acting as such in the capacity as examiner for one or the other of the parties, to follow scrupulously the order of the court providing for the examinations and/or the instructions of the attorney requesting said examinations to insure that the examinations accomplish the purpose desired in assisting the court to arrive at a fair determination of the litigation.

For Your Patients—

Health Insurance is GOOD *Medicine*

Historically, the California Medical Association, of which I am a member, was one of the nation's pioneers in the field of medical care insurance through its sponsorship of the California Physicians' Service. Blue Shield-CPS is a "service plan" as the name implies. It provides medical care rather than a specified sum of money which, in case of illness, you would collect from an insurance company's "indemnity plan."

The folder enclosed explains in considerable detail the various types of coverage. I think the information will be valuable to you and your family.

California Physicians' Service and insurance company programs guarantee your continued freedom of choice of doctor and hospital. It means that if you have this type of protection, our fine relationship, that of patient and personal physician, will not be interrupted as it would be if you became a "captive patient" in a panel practice type plan.

Sincerely,

_____, M.D.

MESSAGE NO. 5. Attractive, postcard-size leaflets, you to fill in signature. Available in any quantity, at no charge as another service to CMA members. Please order by Message Number from CMA, PR Department, 450 Sutter, San Francisco. (Message No. 5 is to be accompanied by CMA's folder "Health Insurance is **Good** Medicine." Folders will be included in your order.)



THE PHYSICIAN'S *Bookshelf*

THE BIRTH OF NORMAL BABIES—Lyon P. Strean, M.Sc., Ph.D., D.D.S., F.A.P.H.A.; Consultant, Norristown State Hospital, Norristown, Pa.; Consultant, Montgomery Hospital, Norristown, Pa. Twayne Publishers, Inc., 31 Union Square West, New York 3, New York, 1958. 194 pages, $3.95.

The theme of this book is to the effect that abnormalities in fetal development are due almost exclusively to the occurrence of some stressful situation during the first three months of pregnancy. Abortions and stillbirths are attributed to the effects of a variety of infections and metabolic and emotional disorders. The mechanism suggested in most instances is the excessive production of cortisone by the adrenal gland in response to the particular stress at a time in pregnancy when various organs and structures are still in a formative stage. Also held responsible for some abortions and abnormalities, especially of the central nervous system, are hypoxia and avitaminosis (especially vitamin B_6). The abnormalities referred to include cleft palate, hare lip, club feet, syndactylism, spina bifida, imbecility, mongolism, congenital heart defects, congenital cataract, etc. The stresses range from trauma, to physiologic events, to a wide variety of emotional upsets.

The author bases his thesis upon the results of animal experimentation in the production of fetal death or abnormality as reported in the literature and as carried out by himself, and upon a series of case histories. A few of the case histories will reveal the flavor of the dissertation: Kick in stomach—malformed right arm, attempted abortion—mongolian idiot, knee injury—cleft palate, tooth extraction—imbecile, poison ivy dermatitis—malformation of gut, hyperemesis—cleft palate, gonorrhea—stillbirth.

The reasoning is *post hoc, propter hoc* I am afraid. Many of the statements made are naive from a medical viewpoint and the whole affair is oversimplified. Heredity is recognized as an occasional cause of abnormality only.

Based on the author's belief he has developed the "Ten Commandments of Genesis" which seek to outline the principles to be followed in order to insure the birth of better babies—such as avoid traumatic stress, avoid physiologic stress (and if you get German measles at two months of pregnancy be sure to take gamma globulin), take multivitamin capsules daily, avoid emotional stress, avoid high altitude flying, avoid drugs such as morphine, tranquilizing agents and cortisone, etc.

This is a very interesting little book in spite of what I believe is gross overstatement and oversimplification. No doubt too many abnormalities have been attributed to "defective germ plasm" and to defective genes in the past and as such regarded as more or less inevitable. The suggestion that greater care and attention in the first three months of pregnancy might assist in avoiding abnormalities or abortion is good and points up the great importance of this formative stage of fetal development.

DANIEL G. MORTON, M.D.

MYASTHENIA GRAVIS—Kermit E. Osserman, M.D., F.A.C.P.; Physician-in-Charge, Myasthenia Gravis Clinic, The Mount Sinai Hospital, New York; Assistant Attending Physician, The Mount Sinai Hospital. Grune & Stratton, New York, 1958. 286 pages, $10.00.

This little book, written by a recognized authority, has much to offer anyone interested in myasthenia gravis, either as the disease presents itself clinically or as it stands in relation to current researches on neuromuscular physiology. Dr. Osserman has provided a book which should be required reading for internists, pediatricians, neurologists, or surgeons who are called upon to manage this uncommon but fascinating disease.

The section on pathology, especially in relation to thymic and cardiac changes, and the illustrations of the muscle cellular pathology will be instructive to those who have felt that the disorder was simply a chemical imbalance at the neuromuscular junction.

In the chapter on physiology one finds, in summary form, a comprehensive review of the modern concepts of neuromuscular transmission. Especially valuable is the clear discussion of the various types of chemical and electrical defects which can produce muscle weakness or paralysis. The reader who has sufficient time and curiosity to read even a few of the many papers referred to in the section on pathophysiology will find a seemingly inexhaustible field of somewhat conflicting data, and the clarity with which Dr. Osserman has dovetailed the experimental results with the clinical problem deserves praise.

The sections on clinical aspects and treatment, complications, and surgical management are without equal as far as this reviewer is concerned, and if the physician does not have the time to struggle with the pharmacology and electrical properties of muscle, he may omit the first few chapters and still deal with the disease effectively. Nowhere will the reader find more attention to the details of clinical management or better instructions in the handling of complications. The values and dangers of the drug tests are thoroughly covered in the section on diagnosis, but the reader may come away with the impression that a diagnosis of myasthenia gravis is not as simple as some of the standard texts would suggest. Nothing could be closer to the truth, and Dr. Osserman has made every attempt to help the clinician evaluate all types of muscle weakness.

Thoracic surgeons will find compelling arguments for or against thymectomy, depending on the individual situation. Pediatricians may find much of interest in the chapters dealing with myasthenia in infants and children.

The book is recommended to anyone who has tried, or is likely to have to try, to diagnose and treat myasthenia. The chances are that anyone who is interested enough to consider seriously the diagnosis of myasthenia in a weak patient will find the answer here, but it is only fair to warn that the extensive bibliography may present a temptation incompatible with busy practice.

TEXAS SURGEON—Donald T. Atkinson, M.D. Ives Washburn, Inc., New York. $3.50.

TO WORK IN THE VINEYARD OF SURGERY: THE REMINISCENCES OF J. COLLINS WARREN (1842-1927) —Edited by Edward D. Churchill, M.D. Harvard University Press, Cambridge, Mass. $6.00.

In these readable and thought-provoking books can be seen, through the lives of two surgeons, some of the diversity of approach and much of the idealism in action that have long characterized the practice of medicine in the United States. The career of Donald T. Atkinson, M.D., included work as a small boy deep in the mines of Canada and immigration to New England. After removal to the Dakotas and attendance at medical school in Kentucky there followed a series of triumphs over frontier conditions in the Southwest. Such a lifetime is strictly in the American tradition. Quite different was the career of Professor J. Collins Warren, M.D. Son of a distinguished medical scholar, Dr. Warren developed his talents in the urban New England tradition and served long and well as a member of the Harvard University medical faculty. Physicians who read these books will certainly recognize some of their own attitudes and hopes in the pages of these interesting memoirs.

From the time of the American Revolution the Warren name has meant something in the history of medical scholarship. Through the skillful editing of Dr. Edward D. Churchill, the meaning of such a brilliant family contribution to medical students, physicians, and the public is made abundantly clear. The editor's notes are in themselves important contributions to medical history. Indeed, the 36-page essay on the evolution of medical teaching at Harvard is a masterpiece of readability and synthesis. Without Dr. Churchill's labors we would not have this assembled reminiscence of Dr. Warren with its insights on pioneering in surgery in America and Europe from the Civil War to the turn of the century. There is a chapter on the kind of life led by a young physician during the Civil War that will certainly arouse the interest of all who enjoy reliving, vicariously, the course of that monumental conflict. But it is the chapters on the gradual development of surgical techniques in Europe, Great Britain, and this country in the 19th century that are the real contribution of the book. Dr. Warren's citation for an honorary degree in 1906 read: "John Collins Warren, Instructor and Professor of Surgery in Harvard University for thirty-five years; author, and eminent practitioner in surgery; the enthusiastic, winning, and indefatigable promoter of the great undertaking of the Medical School, who knew how to inspire others with his own well-grounded hopefulness and ardor."

The wisdom of Dr. Atkinson in *Texas Surgeon* speaks through his fine prose: "In my lifetime I have seen almost unbelievable advances in the healing art. . . . As for knowledge of the body's make-up and its workings, it has grown so swiftly in step with the new insights and measurements of physics and chemistry that I cannot keep up with it all. . . . None of this material had even been clearly anticipated when I was a boy. In this sense I feel myself lucky indeed to have covered such a mighty span of medical development in my lifetime. From the times of Grant, when I was born, to the present of Eisenhower, the river of knowledge has grown enormously. And to have been borne along by this great current has been an adventure far more exhilarating than my youth's wildest imaginings."

Thinking of the problem of financing medical care costs at the present day, this Texas pioneer who once treated Judge Roy Bean and his son, Sam, "at either hip a Colt .45," writes penetratingly, "Either people must on their own initiative learn to save systematically against periods of illness and at the same time spontaneously see to it that doctors are trained to serve them, or an active minority will someday contrive to revolutionize the whole setting. Very naturally I would prefer the first alternative to prevail, and the second I would deplore. But that the first will prevail absolutely, from my observations of human nature, is rather too much to expect. A compromise, then, is my hope."

These are books by surgeons and of special interest to surgeons. Yet this layman reviewer profited from them and recommends them to all who are interested in the role of medical practice in American society. As for medical students, they cannot help but get some thrill of anticipation as they hear Dr. Atkinson, a veteran of 2,500 eye operations in one hospital alone, say simply, ". . . I restored sight to hundreds. In this accomplishment I take satisfaction, a sentiment in which altruism and its spiritual rewards unquestionably figure. Yet there is more to it than hugging myself for having done good, rather than ill, to others. Equally important is the surgeon's gratification in having to some extent correctly sensed and worked within nature's subtle lawfulness. Which is by way of saying that a man must also live for himself, if he is to be successful in living for others." These are worthwhile books.

VAUGHN D. BORNET, PH.D.

* * *

GENERAL OPHTHALMOLOGY — Daniel Vaughan, M.D., Assistant Clinical Professor of Ophthalmology, University of California School of Medicine, San Francisco; Robert Cook, M.D., Clinical Instructor, Department of Ophthalmology, University of California School of Medicine, San Francisco; and Taylor Asbury, M.D., Assistant Professor of Ophthalmology, College of Medicine, University of Cincinnati, Cincinnati, Ohio. Lange Medical Publications, Los Altos, California, 1958. 328 pages, $4.50.

This book with its modest binding and its simple title is one of the most readable, concise, and informative books I have had the privilege to read.

This book is a compend of the knowledge of the teaching staff in the department of Ophthalmology at the University of California.

The authors have done an excellent job in producing a book which every student and every clinician should have readily available. The pathology, the diagnostic points and the accepted treatment are beautifully outlined. The illustrations are adequate.

This is a book that should have wide acceptance.

ALFRED R. ROBBINS, M.D.

* * *

CLINICAL EPIDEMIOLOGY — John R. Paul, M.D., Sc.D., Professor of Preventive Medicine, Yale University School of Medicine. The University of Chicago Press, 5750 Ellis Avenue, Chicago 37, Illinois, 1958. 291 pages, $5.00.

Dr. Paul, as shown by his interesting and important writings, has been concerned for many years with the epidemiological side of various diseases, notably rheumatic fever, poliomyelitis, hepatitis and others. One of his principal theses has been emphasis on the ecological side of disease from the broad standpoint. One welcomes this book, therefore, as a systematic exposition of these ideas. First come chapters on the principles of what Dr. Paul chooses to call "clinical epidemiology" followed by discussions of their application to the study of certain sample diseases. While a good deal of what is said is already familiar ground to physicians, as for example the points raised in the discussion of coronary occlusion, nevertheless Dr. Paul's position is well taken and a deliberate and conscious exposition of the subject is timely and worthwhile. An immense amount of valuable material is presented in 300 pages which can be studied to advantage by every student of medicine and of biology.

ARTHUR L. BLOOMFIELD, M.D.

NUTRITION AND ATHEROSCLEROSIS — Louis N. Katz, M.D., Director, Cardiovascular Department, Medical Research Institute, Michael Reese Hospital; and Professorial Lecturer in Physiology, University of Chicago; Chicago, Illinois; Jeremiah Stamler, M.D., Previously Assistant Director, Cardiovascular Department, Medical Research Institute, Michael Reese Hospital, Chicago, Illinois and Established Investigator of the American Heart Association; Presently Director, Heart Disease Control Program, Chicago Board of Health, Chicago, Illinois; and Ruth Pick, M.D., Assistant Director, Cardiovascular Department, Medical Research Institute, Michael Reese Hospital, Chicago, Illinois and Established Investigator of the American Heart Association. Lea & Febiger, Philadelphia, 1958. 146 pages, 67 illustrations, $5.00.

Dr. Katz, who is well known for his long-time research on certain aspects of nutrition and atherosclerosis, now summarizes in a brief monograph a vast amount of factual material on the question with a bibliography of some 800 references. There are 67 tables and charts. The author distinguishes the "built-in" hazards of developing arteriosclerosis such as hereditary factors, hypertension and others, but emphasizes especially the external factors, such as diet, which he believes serve to promote arteriosclerosis in those predisposed. All the statements made are heavily documented.

ARTHUR L. BLOOMFIELD, M.D.

* * *

RELIGIOUS DOCTRINE AND MEDICAL PRACTICE —Richard Thomas Barton, M.B., B.S., M.D., F.A.C.S., Charles C. Thomas, Publisher, Springfield, Illinois, 1958. 94 pages, $3.75.

This small book is designed to provide a reference for questions of religions dogma as they pertain to the practice of medicine. This is a complicated business because of the very considerable differences in the beliefs of various faiths and, indeed, in the sects found within many great religions, and between the teachings of the founder and the actual practice. Consequently, a volume which attempts to cover such a wide range accurately has difficulty with documentation.

The author emphasizes that his book is in no way complete. The reviewer finds both the historical and the religious portions somewhat superficial. The completeness and the exactness are at their best in the section on Catholicism, next in other Christian religions and at their worst in the discussions of religions of Asiatic and of Middle Eastern origin. Which is perhaps as it should be, considering the people at whom the book is aimed.

All in all, this is a handy, small concise reference, perhaps the best available to the local profession.

EDGAR WAYBURN, M.D.

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PENICILLIN—Antibiotics Monographs, No. 9—Harold L. Hirsh, M.D., and Lawrence E. Putnam, M.D., Washington, D.C. Foreword by Harry F. Dowling, M.D. Medical Encyclopedia, Inc. 30 East 60th Street, New York 22, N. Y., 1958. 148 pages, $4.00.

The reason for this book on penicillin is succinctly and comprehensively stated in the foreword by Dr. Dowling: "For 15 years, doctors have been treating patients with penicillin. Many physicians in practice today do not know what illness can be like without penicillin. . . . During these 15 years several highly effective antibiotics have been introduced, but penicillin still remains supreme in several respects. . . ."

The comprehensive approach ends largely with the foreword and the book rapidly becomes a combination of a miniature textbook of medicine of no particular distinction and a "cookbook"-type compilation of penicillin prescriptions. It is both tiresome and wasteful to have recurring paragraphs every few pages . . . "50,000 units every four hours, 100,000 units every six hours, 200,000 units every eight hours, or 500,000 units every 12 hours. . . ." Most of this is an insult to the reader's intelligence, a waste of paper, and an indication of an archaic approach to the presentation of sensible chemotherapy. To make it somewhat worse all this cookbook material is presented twice, in the text and in separate tables.

There is also a peculiar lack of discrimination in the material presented. One wonders, for example, what might be the purpose of listing all penicillin preparations, from crystalline penicillin G through a penicillin-streptomycin-bacitracin dental paste, without any comment concerning the applicability of the preparation, or a judgment on its worth. Likewise the authors quote a number of reports from the literature without any attempt at interpretation.

From the above it is evident that this reviewer has little admiration for this book and believes that it is a very undistinguished member of this series of monographs. Few physicians will want to purchase the monograph and I doubt that drug companies will distribute it gratis.

ERNEST JAWETZ, M.D.

* * *

STREPTOMYCIN AND DIHYDROSTREPTOMYCIN—Antibiotics Monographs, No. 10—Louis Weinstein, Ph.D., M.D., Professor of Medicine, Tufts University School of Medicine; Lecturer on Infectious Disease, Harvard Medical School; Chief of the Infectious Disease Service and Senior Physician, Medical Service, New England Center Hospital, Boston, Massachusetts; and N. Joel Ehrenkranz, M.D., Assistant Professor of Medicine, University of Miami School of Medicine; Chief of the Infectious Diseases Section, Jackson Memorial Hospital, Miami, Florida. Foreword by Chester S. Keefer, M.D. Medical Encyclopedia, Inc., 30 East 60th Street, New York 22, N. Y., 1958. 116 pages, $4.00.

After the preceding monograph, this No. 10 is like a delightful breath of fresh air. The straightforward, unassuming yet sophisticated presentation is in keeping with the authors' high competence as investigators and clinicians. Tabular material and figures from the literature or the authors' own experience are used to illustrate specific, important points.

The chemical, biological and pharmacological properties of streptomycin and dihydrostreptomycin are presented with discrimination and the use of the drugs in general medicine is superbly described. Tuberculosis is specially omitted, because it forms the basis for another monograph in the series. Of particular value and importance are the thoughtful sections on superinfection, intrathecal administration in influenzal meningitis, and the general risks and advantages of that route, in various forms of meningitis. Four hundred and sixty references are thoughtfully interpreted.

This is an excellent little book which must grace the library of every hospital.

ERNEST JAWETZ, M.D.

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MANUAL FOR THE APHASIA PATIENT — Mary Coates Longerich, Ph.D., College of Medical Evangelists, School of Medicine, Los Angeles, California. Foreword by J. M. Nielsen, M.D. The Macmillan Company, New York, 1958. 277 pages, $4.75.

This is a practical guide for the speech therapist dealing with patients with aphasia, giving specific directions for treatment, with suggestions of the place of the family in the total treatment picture. Although it is conceivable that with the aid of this manual treatment might be undertaken by members of the family without the help of a speech therapist, this would probably be only in exceptional cases.

HENRY NEWMAN, M.D.

SURFACE AND RADIOLOGICAL ANATOMY (For Students and General Practitioners), Fourth Edition—W. J. Hamilton, M.D., D.Sc., F.R.S.E., Professor of Anatomy in the University of London at Charing Cross Hospital Medical College, sometime Regius Professor of Anatomy in the University of Glasgow, formerly Professor of Anatomy in the University of London at the Medical College of St. Bartholomew's Hospital; and G. Simon, M.D., B.Ch., D.M.R.E. (Cantab.), F.F.R., Demonstrator of Radiological Anatomy in the Medical College of St. Bartholomew's Hospital, and Radiologist to the Diagnostic X-ray Department, St. Bartholomew's Hospital, and to the Brompton Hospital, London. The Williams & Wilkins Company, Baltimore 2, Maryland, 1958. 355 pages, $9.50.

This new edition has extensive revision and rearrangement of text, with new illustrations and roentgenographic reproductions, to improve the coverage of surface and radiological anatomy.

Following a chapter on general anatomy and methods, anatomical areas are discussed, in general, as follows: Surface contours, surface and skeletal landmarks, superficial muscles and tendons, joint movements and roentgenology. The special organs and regions are covered separately and well illustrated, with some 416 figures. An appendix contains tables of ossification, and a table of segmental innervation of muscles of the extremities.

While the subtitle of the book states that it is for students and general practitioners, many others will find it of interest.

The authors of the present edition are, respectively, an anatomist and a radiologist attached to two medical colleges in London, England.

L. Henry Garland, M.B.

* * *

TUMORS AND TUMOROUS CONDITIONS OF THE BONES AND JOINTS—Henry L. Jaffe, M.D., Director of Laboratories and Pathologist, Hospital for Joint Diseases, New York, N. Y.; Consultant, Armed Forces Institute of Pathology, Washington, D. C. Lea & Febiger, Philadelphia 6, Pa., 1958. 629 pages, 701 illustrations on 194 figures, $18.50.

This monograph presents an integrated account of tumors of bones and joints. The clinical, radiological and pathological findings pertaining to the various lesions are discussed, frequently illustrated and correlated. The author makes a welcome attempt to consider the radiological findings in terms of gross pathology rather than microscopic; then adding the microscopic findings. There are short sections on treatment.

The various benign and neoplastic conditions taken up in the thirty-three chapters include: Giant cell tumor, bone cyst, aneurysmal bone cyst, benign chondroblastoma, chandromyxoid fibroma, benign and malignant tumors of cartilage, fibrosarcoma, osteogenic sarcoma, and such other conditions as osteoid-osteoma, fibrous dysplasia, pigmented villonodular synovitis, synovioma, chordoma, and also certain cysts and tumors peculiar to the maxillae. Subjects also include juxtacortical chondroma, juxtacortical osteogenic sarcoma, fibrous cortical defect, desmoplastic fibroma, and benign osteoblastoma.

To a large extent, the text conveys the author's personal conceptions of the lesions involved. His great experience warrants considerable attention being paid to many of his suggestions and conclusions.

In the section on giant cell tumor, the author states that post-irradiation sarcoma may develop, but fails to stress the fact that several authors have reported sarcoma developing in what was apparently benign giant cell tumor many years after diagnosis or surgical treatment, and *without* the intervention of radiotherapy. It would seem important to add this point to subsequent editions. The author uses the term "solitary bone cyst" rather than localized fibrous dysplasia; the reasons for this are adumbrated in a paragraph dealing with the differential diagnosis of cyst and solitary focus of fibrous dysplasia. The matter is somewhat academic, but might bear expansion in a subsequent edition.

The author refers to the common finding of vertebral hemangioma at autopsy but believes that many of the benign hemangiomas of bone interpreted in the roentgenograms of the spines of living persons are "mere focal varicosities rather than true hemangiomas." The evidence for this opinion is not given. The experience of your reviewer is that benign hemangiomas of the vertebrae are indeed quite common, just as benign hemangiomas of the cutaneous and subcutaneous tissues are.

The book is handsomely printed and illustrated. It will be welcomed by surgeons, pathologists and radiologists.

L. Henry Garland, M.B.

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CARDIAC ARREST AND RESUSCITATION—Hugh E. Stephenson, Jr., M.D.; Professor and Chairman, Department of Surgery, University of Missouri School of Medicine, Columbia, Missouri; Chief of Surgical Service, University of Missouri Hospitals; Associate-in-Charge, Cardiovascular Program, State Crippled Children's Service, University of Missouri; Consultant, Whiteman Air Force Base Hospital; Markle Scholar, John and Mary R. Markle Foundation, 1954-1959. The C. V. Mosby Company, St. Louis, 1958. 378 pages, $12.00.

This comprehensive and carefully documented volume will serve as an excellent reference book on the subject of cardiac resuscitation. The various aspects of the problem are individually considered and are presented clearly and in detail. The volume of material, however, is excessively large and interferes with the book's attempt to emphasize the important points and fundamentals of the problem. Little effort is made to distinguish between the clearly documented physiologic information on cardiac arrest and the large fund of opinions, many of which are unscientific. No one would quarrel with the cautious and well-supported statements the author makes, but one would hope for a more authoritative approach to a complex subject about which misinformation abounds.

In an extensive historical background, credit is given to nearly every contributor to this field; however, the author does not emphasize the importance of the fundamental concepts outlined by Wiggers and Wegria some 20 years ago.

This book would be more suitable as a general reference volume rather than as a manual for surgeons on the prevention and management of cardiac arrest.

Benson B. Roe, M.D.

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ORAL SURGERY—Third Edition—Kurth H. Thoma, D.M.D., Professor of Oral Surgery, Emeritus, Harvard University. The C. V. Mosby Company, St. Louis, 1958. 1607 pages, 1824 illustrations, including 159 in color, $27.50.

This is a lengthy, scholarly text on the subject of oral surgery. The book is definitely a reference book in the field and is not the type of book that one would read for ordinary comprehensive information about the field of oral surgery. It is massive, well done, beautifully illustrated and detailed in its discussions of etiology, pathology and clinical appearance of lesions of the oral cavities.

The section on surgical treatment is not too well done and the illustrations on surgical operations about the head and neck are rather meager.

The book is recommended as a reference book in the field of oral surgery, not for cursory perusal or rapid source of comprehensive information in the general field of oral surgery. It is scholarly, well done, but excessively detailed. Libraries and specialists would do well to own this book but the general surgeon, the general practitioner need not have it for his library shelves.

GYNECOLOGIC RADIOGRAPHY—Jean Dalsace, M.D., Chief of Sterility Service, Broca Hospital, University of Paris, Paris; and J. Garcia-Calderon, M.D., Radiologist, University of Paris School of Medicine, Paris; with a chapter on Radiography of the Breast, by Charles M. Gros, M.D., and Robert Sigrist, M.D. Foreword by I. C. Rubin, M.D.; translated by Hans Lehfeldt, M.D. A Hoeber-Harper Book (Paul B. Hoeber, Inc., Med. Book Dept. of Harper & Brothers), 49 East Thirty-third Street, New York 16, N. Y., 1959. 188 pages, $8.00.

In this modest atlas of hysterosalpingography, translated from the French, it is suggested that radiography of the female genital organs should be undertaken much more often than has been our custom in this country. This advice may be difficult to reconcile with the current limitation of radiation involving gonads and early pregnancies. The book contains 305 figures, most of which are excellent reproductions of radiographs, including a few that show breast structures. The major emphasis is on submucous myomas and polyps, cervical and endometrial cancer, and obstruction of Fallopian tubes. The authors believe that skillful hysterography should lead to the diagnosis of cancer in its early stages, but this would seem to be a crude and potentially dangerous device for cancer detection.

As one looks down the long list of items illustrated in this atlas, including even a few normal pregnancies, it becomes obvious that hysterography is useful mainly in establishing the presence of congenital malformations. Even in the diagnosis of tubal occlusion, some workers now prefer culdoscopic visualization of the passage of injected dyes and direct study of peritubal adhesions.

This book is beautifully made and can be recommended as a work of art to radiologists and as an item of at least historical interest to gynecologists. There is a brief foreword by the late Isidor Rubin, who concluded with this apt phrase—"insofar as they have gone, the authors have succeeded admirably."

C. E. McLennan, M.D.

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EMERGENCY SURGERY—Seventh Edition—Hamilton Bailey, F.R.C.S. (Eng.), F.A.C.S., F.R.S.E., Emeritus Surgeon, Royal Northern Hospital, London; Consulting Surgeon, the Italian Hospital; General Surgeon, Metropolitan Ear, Nose, and Throat Hospital; Vice-President of the International College of Surgeons; formerly Hunterian Professor, Royal College of Surgeons of England, and External Examiner in Surgery, University of Bristol. The Williams and Wilkins Company, Baltimore, 1958. 1197 pages, $32.50.

The present work represents the seventh edition of this excellent book on Emergency Surgery. This is undoubtedly the finest book available on Emergency Surgery.

The book is extremely practical and the assumption is made that a young surgeon is dealing with a patient stricken with an acute surgical emergency. The problems are discussed from the standpoint of the isolated, young and capable surgeon called upon to carry out appropriate treatment under these conditions. Emphasis is placed on when to operate, when not to operate, and how to operate under emergency situations. Many authors contributed to the revision of chapters, correction of portions of chapters, and writing of some chapters, but the work is obviously the masterpiece of Hamilton Bailey who has devoted his life to making this the outstanding text on Emergency Surgery. I think he has completely succeeded in this and the book is highly recommended to general surgeons.

The topics covered include: The Extremities; Ear, Nose and Throat; Abdominal and Thoracic Surgery; Urological Surgery; Proctological Surgery; and Congenital Anomalies. The lesions are discussed in sufficient detail, and great emphasis is placed on the unusual conditions in which emergency surgery is a life-saving procedure. Some objection might be raised to the space devoted to these rare conditions, but when one is dealing with an individual life, sufficient information about an individual problem must be available to the surgeon confronted with emergencies to solve these problems. This is the spirit in which the book is written and it succeeds entirely.

This book is wholeheartedly recommended as an outstanding text on Emergency Surgery.

Victor Richards, M.D.

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DISEASES OF THE COLON AND ANORECTUM—Volumes 1 and 2—Edited by Robert Turell, M.D., Associate Surgeon and Chief, Rectal Clinic, The Mount Sinai and Montefiore Hospitals; Surgeon, Bronx Municipal Hospital Center; Associate Professor of Clinical Surgery, Albert Einstein College of Medicine, New York. W. B. Saunders Company, Philadelphia, 1959. Vol. I, pp. 1 through 608; Vol. II, pp. 609 through 1238. $35.00 per set.

This is a massive, complete work in two volumes of diseases of the colon and anorectum. Altogether there are 1238 pages in the two volumes at a price of $35.00 per set. The two volumes have been edited by Robert Turell, M.D., a well-known proctologist, and consists of some 50 odd chapters, the majority of the chapters being written by separate individuals. Everything is covered from chronic constipation to diets to pruritis ani to sphincter-saving operations. The contributors have been carefully selected for their actual contributions to surgical literature in the chapters that they have written. The organization of the book is: Applied Basic Science, 10 chapters; Diagnosis, 4 chapters; Anesthesia, 1 chapter; Colorectal Lesions, 25 chapters; Anorectal Lesions, 8 chapters, and 10 chapters on special considerations in diseases of the colon, anus and rectum consisting of Congenital Anomalies, Pediatric Problems, Obstetrical and Gynecological Problems, Complicated Problems in Malignancy, Office Problems, and Occupational Aspects of Anorectal Disease.

The book is profusely illustrated. The drawings are clear and accurate, and the techniques illustrated are those that have proved successful in the hands of the contributors.

The book is directed primarily to the general surgeon, but it would serve equally well for specialists in proctology as a reference book. It is quite complete, the newest concepts have been presented, and since a large variety of authors is included in the various chapters there is no dominance of the book by personal impressions of the editor. Each chapter has been preserved as an independent whole, but the chapters together are arranged into a complete coverage of ano-rectal and colonic diseases for gastroenterologist, internist, pediatrician, or general practitioner. The book, I think, will be particularly helpful to the general surgeons who are interested in a good reference book on diseases of the colon and anorectum and a quick method of finding the solution to the immediate problem at hand.

The only objections that I have to the book are that it is too lengthy and too costly, but an effort has been made to make it comprehensive.

Victor Richards, M.D.

California MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
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Volume 90 JUNE 1959 Number 6

Subtotal Gastric Resection

An Appraisal of a Means of Treatment of Benign Peptic Ulceration of the Stomach and Duodenum

EDWIN G. CLAUSEN, *M.D.*, and ROBERT J. JAKE, *M.D.*, Oakland

• **In a series of 400 cases of subtotal gastric resection for the treatment of benign ulceration of the stomach and duodenum, the mortality, morbidity and recurrence rate was acceptably low. Fifty-six per cent of the patients had a perfect result, 38 per cent satisfactory, and 6 per cent unsatisfactory. However, the postoperative nutritional status was sufficiently interfered with in a number of patients whose preoperative weight was subnormal that the routine adoption of 75 per cent gastric resection must be questioned. Vagotomy with either pyloroplasty or partial resection may prove to be the most valuable procedure for patients of this type. In properly selected patients, however, gastric resection is a rewarding procedure for both patient and surgeon.**

THE MOST COMMONLY EMPLOYED surgical procedure for benign peptic ulceration of the stomach and duodenum is subtotal gastric resection. Since the results of this procedure are often not completely satisfactory, vagotomy with an emptying procedure, or combined with hemigastrectomy, is now being used more frequently. The ideal operation is one which would result in low mortality and recurrence rates and a minimum of sequelae. An analysis of a series of 400 patients operated upon by the senior author from 1946 to 1958 has been made in order to appraise the results of subtotal gastric resection.

The location of the ulcers is shown in Table 1. All the gastric ulcers were benign and the gastrojejunal ulcers were treated by subtotal gastric resection only. Thirty per cent of the patients were women. Indications for operative treatment were long-established symptoms, such as chronic pain, hemorrhage (uncontrolled or recurrent), obstruction, repeated perforations, and, in the case of gastric ulcers, possible malignant change. In many instances the indications for operation were combined. The duration of symptoms in most instances was 10 to 20 years except in patients with gastric ulcerations. In general the best results occurred in patients

TABLE 1.—*Data on 400 Cases of Subtotal Gastrectomy for Benign Ulceration of the Stomach and Duodenum*

	No. of Patients	Per Cent
Location of ulcer:		
Duodenal	289	75.25
Gastric	89	22.25
Gastric and duodenal	7	1.75
Gastrojejunal	15	3.75
Sex:		
Male	280	70
Female	120	30

From the Department of Surgery, University of California School of Medicine, San Francisco 22.

Chairman's Address: Presented before the Section on General Surgery at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

TABLE 2.—*Operative Procedure Employed in 400 Cases of Benign Ulceration of the Stomach and Duodenum*

	No. of Patients	Per Cent
Subtotal Gastric Resection with:		
Anterior gastrojejunostomy	262	65.5
Posterior gastrojejunostomy	56	14
Gastroduodenostomy	82	20.5
Cholecystectomy	10	2.5
Antral exclusion	9	2.25

TABLE 3.—*Length of Stay in Hospital for Patients Operated Upon for Benign Gastric or Duodenal Ulceration*

	No. of Patients	Per Cent
7 days or less	152	38
8 days or less	262	65.5
10 days or less	318	79.5

TABLE 4.—*Complications in 400 Cases in Which Operation Was Done for Gastric or Duodenal Ulceration*

	Cases
Abdominal pain—26 cases (6.3 per cent):	
Duodenal stump leakage	2
Postoperative bleeding	9
Wound dehiscence	6
Partial stomal obstruction	3
Wound infection	2
Partial loop obstruction	1
Small bowel obstruction	1
Common duct injury	1
Pancreatic fistula	1
Extra-abdominal—44 (11 per cent):	
Atelectasis	27
Cystitis	7
Pulmonary embolus	2
Cardiac decompensation	2
Cerebral vascular accident	1
Fever of undetermined origin	5

with a long history of symptoms. Only 15 patients (3.7 per cent) were operated upon for emergency treatment of bleeding. No resection was done at the time of operation for a perforated ulcer.

The type of operative procedure is shown in Table 2. More recently we have preferred anterior gastroenterostomy to posterior gastroenterostomy. A gastroduodenostomy was done when feasible but no attempt was made to compromise on the amount of stomach removed. A Billroth I procedure was used in 72 patients, 31 of whom had gastric ulcers. Early in the series a 60 per cent resection was done while in the past five years a 70 to 75 per cent resection was done. Antral exclusion, done in nine early cases due to the hazardous operative condition of the duodenum, is no longer employed. Concomitant cholecystectomy was done in ten cases (2.5 per cent). Multiple procedures were discouraged but were employed occasionally in ideal circumstances.

Antibiotics were used prophylactically early in the series, but only therapeutically in the past five years. The complications apparently were not influenced by the use of antibiotics prophylactically. The number of postoperative hospital days is shown in Table 3 (79.5 per cent of the patients were in hospital ten days or less). Patients without complications were usually ready for discharge on the seventh postoperative day.

Four patients died postoperatively. Two of these deaths were due to anesthesia, one of them occurring after spinal anesthesia, hypotension and anoxia, and the other after the use of Anectine (succinylcholine chloride) and resultant irreversible respiratory paralysis. Of the other two deaths one was owing to postoperative hemorrhage, wound dehiscence and cardiac failure and one to peritonitis resulting from an unrecognized leak of the duodenal stump.

Postoperative abdominal and extra-abdominal complications are shown in Table 4. The most serious intra-abdominal complication was leakage of the duodenal stump. Even if this condition is recognized, the mortality is high. The use of a duodenal catheter in substitution for duodenal closure has been advocated, but we have not used this procedure. When a pronounced inflammatory process is found involving the duodenum and head of the pancreas, the surgeon cannot help feeling (except in uncontrolled bleeding) that his choice of procedure or of time for the operation was at fault. Intensive nonsurgical treatment at the peak of the patient's symptoms often will bring about subsidence of this inflammatory process. Furthermore, an alternate procedure such as vagotomy with pyloroplasty or gastroenterostomy may best be employed when the inflammatory process of the duodenum makes resection hazardous.

Other complications such as stomal leaks and obstruction were not a problem in this group of patients. It was not our experience that postoperative hemorrhage was more likely in patients who bled preoperatively. Other complications were infrequent. Wound dehiscence can occasionally be predicted in obese, muscular patients or in patients with preoperative chronic pulmonary problems. We have discontinued the use of nasogastric suction and have noted a distinct decrease in pulmonary complications without any untoward intra-abdominal complications. Application of proper surgical principles at the time of operation and close postoperative surveillance have reduced the complications in "good risk" patients to an acceptable minimum.

The recurrence of an ulcer may be difficult to ascertain and clinical impressions must be resorted to. Roentgenographic visualization of a recurrent ulcer has not been very successful. Patients may bleed asymptomatically on one or two occasions only. Symptoms suggesting ulcer frequently subside after problems of emotional stress are treated. Some

TABLE 5.—*Results as Observed in 292 of 400 Patients Who Had Subtotal Gastric Resection for Benign Ulceration of the Stomach or Duodenum*

	No. of Patients	Per Cent
Perfect	164	56
Satisfactory	113	39
Unsatisfactory	15	5
Proved recurrence	9	
Other	6	

digestive complaints may be eliminated by the discovery and treatment of an unrelated disease. There were nine patients (3.1 per cent) with proved recurrent ulcers and three with asymptomatic bleeding (Table 5). Four of the recurrences were apparent within 12 months of the resection. There have been no recurrences in this series after three years although we are aware that they may occur at any time. Two of the recurrences were in patients who had an antral exclusion. Nine such operations were done. One patient who had bled postoperatively asymptomatically had a Billroth I procedure. The remaining recurrences were following a Billroth II procedure. There has not been any recurrence to date in those who had a 75 per cent resection.

Just as the recurrence rate may be difficult to ascertain, the long term results may likewise be difficult to evaluate. As time passes, the results of the operation will improve, probably because the patient learns to adjust to the idiosyncrasies of his disease. It has been our experience that if patients are carefully questioned, most of them will at some time shortly after operation mention some symptoms of the "dumping syndrome." Most of these patients soon learn that they are unable to take sweets, and a few that they cannot eat dairy products. Only one patient in this series was incapacitated because of the dumping syndrome. This patient did fairly well for two years after operation, but following a coronary occlusion and severe emotional stress he was unable to work because of nutritional changes secondary to the dumping syndrome. He did not have anemia and the volume of blood was normal. This patient had a Billroth I anastomosis. The incidence of dumping was essentially the same for the patients in the Billroth I and II groups. No attempt has been made to narrow the stoma in any of these cases.

The postoperative nutritional status of the patient may be disturbing, particularly in women. Some 12 per cent of the patients in this series were unable to regain or maintain their weight at a satisfactory level. An attempt to assess the merit of a procedure based on the ability of a patient to regain ideal weight seems illogical, since many normal people may never reach their ideal weight. As the surgeon surveys the preoperative weight and dietary habits of these patients, he can usually predict those who will have a nutritional problem postoperatively. Since these patients have experienced a reduction in caloric intake and have a relatively inefficient gastrointestinal tract, the surgeon should not be surprised to find that they fail to gain weight. Patients who eat well and have difficulty with excessive weight do not, as a rule, have any nutritional problems postoperatively. Those who are underweight despite a high caloric "ulcer diet" can hardly expect to regain their ideal weight postoperatively. Our experience has been that a patient's eating habits and bodily build have more influence in determining the postoperative nutritional status than the amount of stomach resected. Some patients who were overweight assumed a desirable weight postoperatively. Many whose weight is below the ideal accept this level although women are less likely to accept a weight loss below the preoperative level. Although a high gastric resection reduces the incidence of recurrence its routine use in underweight patients seems undesirable.

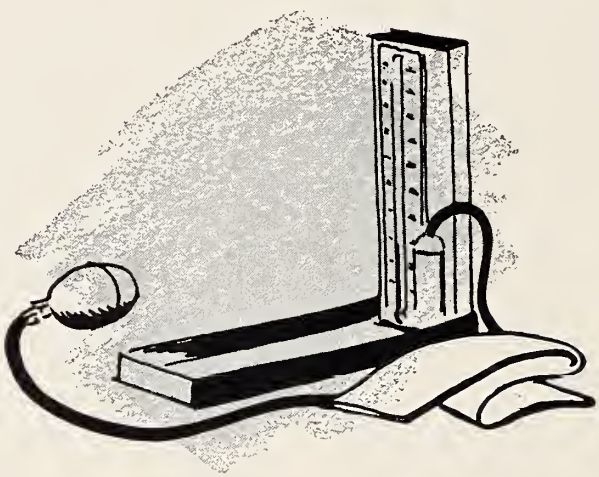
Based on a follow-up of 73 per cent of the patients in this series, 164 (56 per cent) were able to eat everything, a normal amount, and their weight was ideal or above (Table 5). One hundred twelve (38 per cent) were satisfied with the operation but had some food idiosyncrasies or their weight was below their desired level, and in six instances the patients stated that they wished they had not been operated upon. Among these six were one with uncontrolled dumping, two in whom the pathologic change was minimal and hence the operation ill advised, and three with emotional problems which would preclude a satisfactory result with any operative procedure. One patient who did well for four years was then subjected to great emotional stress and developed an incapacitating postpyramidal hypoglycemia. Improvement followed dietary management. As previously mentioned, there were nine proved recurrences and three unproved. It was our experience that any follow-up other than direct questioning proved to be misleading. Many patients who claimed to be in perfect health could not eat sweets and had other minor complaints. On the other hand a patient who said he had a poor result might be an alcoholic or perhaps be suffering from an unrelated illness. We found it difficult to appraise the entire series satisfactorily since the individual response was so variable. Patients who had bleeding as the chief indication for operation and in whom pain was not the predominant factor, were not as enthusiastic about the results of surgical treatment as were those with severe pain or obstruction. Patients with minimal pathologic change observed at operation, despite the array of symptoms, were likely to have more complaints postoperatively. We did not do extensive resection on patients of this type.

DISCUSSION

An appraisal of the treatment of peptic ulcer of the stomach and duodenum by subtotal gastric resection shows that the mortality and morbidity was acceptably low. The recurrence rate can be lowered further by a high 75 per cent resection and the result would be more satisfactory. Although the over-all late results have been satisfactory, nutritional disturbances occurred often enough that the advisability of a routine 75 per cent resection is doubtful. The use of vagotomy with an emptying procedure may eventually prove to be the better procedure. To date, vagotomy and gastrojejunostomy has not proved to be superior to subtotal gastrectomy. Vagotomy with pyloroplasty is a simple procedure and the results to date are encouraging. Partial gastrectomy with vagotomy is the most appealing procedure, but the mortality and morbidity associated with it may tend to limit its advantages.

We believe that each procedure should be selected individually to treat a specific patient. In patients whose weight has never been a problem (except in abundance) a high subtotal gastric resection will usually give an acceptable result. For patients who are underweight, vagotomy with pyloroplasty may be the most promising procedure. In cases in which the local condition of the duodenum precludes satisfactory pyloroplasty or the stomach is large and atonic and does not empty properly, partial resection with vagotomy would seem indicated. Patients who are emotionally unstable probably will not do well regardless of procedure; in fact a high gastric resection makes them susceptible to many postoperative complaints. Vagotomy with an emptying procedure or resection should not be done unless the surgeon is absolutely confident of the completeness of the vagotomy, a challenge which he will occasionally encounter. We are unable to determine preoperatively which patients are most likely to have a recurrence. In patients whose nutrition was poor (in the absence of obstruction) before operation, extensive resection cured the ulcer, but subsequent nutrition was poor, a phenomenon which has led us to adopt a more conservative attitude. In such circumstances we are inclined to do a vagotomy with pyloroplasty.

418 Thirtieth Street, Oakland 9 (Clausen).



Privileged Communications

Physician-Patient Confidences in California

HOWARD HASSARD, San Francisco
Peart, Baraty & Hassard
General Counsel, California Medical Association

ONE OF THE OLDEST and most respected statements of an ethical code is the Oath of Hippocrates. Section 9 of the Code of Medical Ethics adopted by the American Medical Association, is a modern restatement of that part of the Hippocratic Oath relating to professional confidence. It reads:

> *"A physician may not reveal the confidence entrusted to him in the course of his medical attendance, or the deficiencies he may observe in the character of his patients, unless he is required to do so by law, or unless it becomes necessary in order to protect the welfare of the community."*

Writers and philosophers have extolled the physicians of their time not only for ministering to the sick but for guarding the secrets of their fellow man.

Communications between physician and patient, lawyer and client, husband and wife, minister and penitent are described by courts and legal writers as confidential communications. The law grants to them certain privileges. Two general situations exist. The regular relationship between physician and patient is governed by what may be termed "Rule of Confidence." When a matter is litigated before a court (or its equivalent), the public good is said to require that necessary information must be produced; however, certain exceptions are provided and one of these relates to privileged communications between a physician and a patient. This problem will be discussed under the title, "The Rule of Privilege."

RULE OF CONFIDENCE

The knowledge received by a physician in his official capacity is given with the implied agreement that such knowledge will not be revealed to others. It has been called an entrusted secret. This trust is binding in conscience and in law. The reasons are:

(a) An implied contract exists and a violation is breach of faith, and

(b) The revelation would injure the common good since people would lose confidence and would not feel free to consult.

Professional confidence includes everything of a secret nature concerning the patient's health which the physician learns from him during the performance of professional duties. It should include all information about himself and others which the patient tells to the physician to clarify his case and all knowledge of defects or ailments which the physician acquires while rendering medical services. It binds not only the physician making the examination, but also any physician who is brought into consultation.

Wilful violation by a physician of the patient's confidence is an illegal act in California. Section 2379 of the *Business and Professions Code* provides that wilful betrayal of a professional secret constitutes unprofessional conduct, for which the physician's medical certificate may be suspended or revoked. Since the act of revoking or suspending a license of any physician for a wilful breach of the patient's confidence is penal in nature, the provisions for revocation or suspension are certain to be strictly construed. When they are so construed, the physician must be found guilty of a "wilful" betrayal. The word "wilful" implies a deliberate intention for which no reasonable excuse can be given. Proof is usually made by showing some design or purpose on the part of the physician to do injury or secure an advantage. The rule does not apply to harmless disclosure innocently made without objection from the patient whom they concern.[1]

It is not completely settled law, but it is probable that a physician may not only be guilty of unprofessional conduct should he violate the confidence of his patient, but he also might be civilly liable for any actual damages suffered by the patient which were directly caused by the physician's wilful violation of confidence.

Parents and guardians (both natural and those appointed by courts) have a right to share the

AUTHOR'S NOTE: This article has been prepared for the Commission on Professional Welfare of the California Medical Association, in response to Resolution No. 31 adopted by the Association's House of Delegates in May 1958, directing the Commission on Professional Welfare ". . . to undertake a complete study of all phases of the confidential nature of the physician-patient relationship. . . ."

This article undertakes primarily to review the *legal* aspects of this problem. In its preparation valuable assistance was furnished by Doctor Arthur A. Kirchner, chairman of the Commission on Professional Welfare, who acted as "medical reviewer." In addition, I am greatly indebted to Mr. William M. Whelan, director of Special Services for the C.M.A. who not only reviewed preliminary drafts but contributed materially to the reorganization and orderly presentation of the various facets of the law in this field. Finally, Mr. G. William Filley, of our office, spent countless hours in legal research and in preparation of the working drafts.

knowledge which a physician acquires by virtue of his medical examination which they should know to provide for the health, welfare and best interests of the child or ward. A minor having reached the age of reason owns his own thoughts and can make personal revelations to a family physician which the physician should not communicate to the parents without the child's consent or unless it is necessary to do so for the child's own best interests in a matter of serious consequence.

Professional secrets may be revealed where there is just cause—that is, where to keep the secret injures either the common good or the good of some individual. Some writers have described situations of four types in which a secret may be revealed:

(a) *The common good demands it be revealed.* Public health requirements that persons having contagious diseases be appropriately reported illustrate this exception.

(b) *Grave injury would unjustly come to a third party.* An illustration would be a situation in which a physician discovered a communicable disease in a person who is about to be married or to become the traveling companion of another.

(c) *Grave harm would come to the person confiding the secret if the confidence were strictly kept.* For example, a case in which revealing the patient's illness to others is necessary in order that he receive proper treatment.

(d) *Grave harm would come to the physician.* For example, a situation in which a physician might be convicted of a crime if he did not reveal a secret.

It has been held that a physician did not violate the rule of confidence when he revealed to a patient's spouse that the patient was suffering from a venereal disease.[2] The court stated that to prevent spread of the disease it was legally proper to communicate to one who it was reasonable to suppose might otherwise be exposed to such disease. Good faith, absence of malice on the part of the defendant and disclosure only to a close member of the family are permissible. Thus, social benefit cancels out the obligation of secrecy.

When a revelation is made, the physician should assure himself it is made to the person entitled to it, such as the parent or guardian. A phone call should not be used if the physician cannot recognize the voice of the parent. Seldom if ever should one use a telegram or a letter since he could not be sure into whose hands such communications might fall. The method used should be calculated to preserve the confidence in professional secrecy.

Since the physician is obligated to use due diligence in keeping hidden all professional secrets, he must see to it that confidential reports, case histories, correspondence, medical prescriptions and the like regarding his patients are kept in a safe place. He needs to make sure of the trustworthiness of his office assistants.

Required Public Health and Public Policy Disclosures

The laws of California and its municipalities require, in the interest of public health and welfare, that physicians make reports to public officials about patients having certain contagious diseases, wounds or injuries inflicted by one's own acts or by the acts of another, diseases that may endanger third parties (epilepsy, for example), narcotic addiction and the like. The duty to report cases of contagious diseases also applies to those who have come in contact with cases or carriers of contagious diseases.[3] Such legally required disclosures do not violate professional confidence.

Privilege is not an absolute concept. It grew up to facilitate the equitable doctrines of the law. When the public welfare demands it, the concept bends with the situation. Thus, if a physician is questioned in a guardianship hearing for an incompetent, there is no breach of privilege if the physician testifies as to the incompetent's alcoholic habits or his sanity.[4]

Knowledge of Criminal Actions

One of the celebrated miscarriages of justice in this country was the conviction and sentencing of Doctor Samuel A. Mudd, who set the leg of John Wilkes Booth, which had been broken in a jump to the stage of the theater after he had assassinated President Lincoln. Booth fled south to La Plata, Maryland, found Doctor Mudd at his home where his injury was diagnosed and his leg set. It is established that Doctor Mudd did not know that Booth was the assassin although the doctor may have previously met Booth socially.

In California there is no specific duty to report a past or proposed crime (except a physician *must* report patients with injuries caused by violent or criminal acts as required by the Penal Code). It has been held that a person who saw another committing a crime but did not interfere is not under the burden of proving himself innocent.[5] There is no crime of aiding and abetting, punishable as such, in California.[6] Thus, knowledge (without support) of a projected crime evokes no duty upon the citizen, other than moral, to report this information to the proper authorities.

However, it *is* a crime for anyone to advise, encourage or abet a criminal act or to harbor or conceal a criminal. "Conceal" means affirmative aid to the criminal, not mere neglect to notify the police.[7]

Today, particularly in the field of psychiatry, physicians may receive information from a patient concerning either a past or proposed crime. The

principles previously discussed which would justify a physician's making a disclosure of a professional secret, should be used as a guide, *i.e.*, where the common good or the good of some individual would be injured by remaining silent, the physician may voluntarily make a revelation. For example, if a patient admits to being a fugitive, to being blackmailed by a foreign agent, or is known by the physician to be armed and is considered to be dangerous, in the interests of protecting the general welfare of society the physician is justified in making a prompt revelation to the proper authorities.

A threat to kill made in the presence of a physician during a professional attendance is not a professional secret.[8]

The physician should attempt to dissuade the commission of a proposed serious crime. Where a past serious crime is disclosed, a physician might very well advise the patient to consult a clergyman or lawyer to obtain proper advice about what the patient should do to make amends for the crime. If at a later date, a statement is made by the patient in open court that he made a disclosure to a particular physician about his crime, the physician may then properly disclose what advice he gave the patient.

If a physician is called as a witness in a criminal case, he may be required to disclose confidential communications, as California law does not extend the privilege to criminal cases.[9]

Communications between a physician and patient are not considered privileged if they are made in furtherance of criminal purposes. A physician cannot employ the privilege as a screen for the protection of his patient or of himself against prosecution for a crime.

Waiver of Professional Confidence

A life insurance company or a business firm may require a person to submit to a physical examination before issuing a policy of insurance or employing the person. The person who takes such an examination, expressly or by implication grants permission to the examining physician to reveal to the company the results of the examination. The same rule applies in reference to application for disability benefits, pensions and compensation claims, generally. In all such instances, the physician filling out the form supplying the information he obtained in his professional capacity, should assure himself that the patient has waived the obligation of secrecy. If the physician is not sure of the waiver, he should hand the forms to the patient and let him give them to the appropriate party. The medical examination should be reported only in the most general terms. Where the physician finds facts that could seriously discredit a person if disclosed, he might well consider urging the applicant to withdraw his request.

It is well to bear in mind that only the information requested should be given, and no information should be volunteered, since a waiver extends only to the information needed.

It has generally been held that when a patient comes into a physician's office and is examined in the presence of a third person (other than a parent, guardian, necessary nurse or assistant), communications made are not confidential and will not be considered privileged.

Permission to Publish Case Histories

When a patient gives the physician permission to publish a case history of the patient's malady in a medical journal or textbook and it is so published, this will not act as a general waiver permitting further revelation in court or in a nontechnical publication.

THE RULE OF PRIVILEGE

In early Anglo-Saxon law, the physician was compelled to testify in a legal proceeding as any other witness for the reason already noted that justice would only prevail if all facts were disclosed. The courts began to realize that certain exceptions to this rule needed to be made. The Bill of Rights had provided that an Englishman charged with a crime could not be compelled to testify against himself. The welfare of a family and the conception of the oneness of husband and wife gave rise to an exception being made to their disclosures of confidential communication. Professional communications between lawyer and client became "privileged" and not subject to compulsory disclosure. The courts gradually began to express the policy that the confidences between patient and physician should likewise be protected and encouraged for the reasons stated above under "Rule of Confidence." New York passed the first law in the United States establishing a physician-patient privilege, and now in all but 18 of our states similar laws have been enacted.

"Courtroom" privilege runs counter to the basic policy of our legal system that *all* facts shall be disclosed. Hence, legal writers still have gnawing doubts. Zechariah Chafee, Jr., Harvard Law School professor, in an article entitled, "Privileged Communications. Is Justice Served or Obstructed by Closing Doctors' Mouths on the Witness Stand?"[10] said that unrestricted interpretation of the privilege has:

1. Fostered fraudulent claims in the field of personal injury litigation,

2. Permitted unwarranted recovery on insurance policies, and

3. Interfered with the proper determination of mental capacity of decedents where that fact is disputed.

Professor Wigmore's work on the law of evidence is generally considered to be the leading authority on the subject. He has advanced four fundamental conditions that should be established in order for privilege against disclosure of communications between persons standing in a confidential relationship to be granted:

1. The communications must originate in a confidence that they will not be disclosed,

2. This element of confidentiality must be essential to the full and satisfactory maintenance of the relation between the parties.

3. The relation must be one which in the opinion of the community ought to be fostered,

4. The injury that would be done to the relationship by the disclosure must be greater than the help which disclosure would give toward the correct resolution of litigation.

It has been argued that few instances exist in which communications to a physician are wholly confidential. Where facts made known to a physician are well known to intimates, neighbors, friends, employer, insurance carrier and others, it can hardly be contended that such facts are secret. The privilege has not existed in England or in the New England States. It must be conceded, therefore, that people do seek medical advice even where the privilege doesn't exist.

For these reasons, we must expect the courts to examine closely all situations in order to assure that recognition of the privilege will not do injustice through suppression of material facts. To put it another way, where medical testimony is absolutely necessary for learning the truth, the law will probably require disclosure unless it meets the four conditions laid down by Wigmore.

Privilege in California

The California *Code of Civil Procedure,* Sec. 1881, provides that a licensed physician cannot, without the consent of his patient, be examined in a *civil* action, as to any information acquired in attending the patient which was necessary to enable the physician to prescribe or act for the patient; however, such physician may in matters concerning the estate of a deceased person testify as to the mental condition of the decedent and in so testifying may disclose information acquired by him concerning the deceased. The right to waive the privilege is that of the patient and in the event of death of the patient the privilege may be waived by the executor or the administrator of his estate or the surviving spouse of the deceased or the children of the deceased or if they are minors, by their guardian.

This privilege is developing gradually in those states where the legislature has not granted a privilege. The courts by judicial decision have created a privilege. A recent 1952 Illinois case[11] has established the right of a psychiatrist in a non-criminal case to refuse to reveal communications of his patient in the absence of a waiver by or permission from the patient.

Waiver of the Privilege by the Patient

The privilege of silence in a court of law concerning the communications from his patient is not absolute in California, for it applies only in civil cases. The privilege is that of the patient or his legal representative and can be waived by the patient or his representative. A patient may expressly waive the privilege by calling upon the physician to testify in court. Under the provisions of Section 1881 of the California *Code of Civil Procedure,* the privilege is expressly withheld from actions for personal injury or for wrongful death, and it is specifically provided that either before or after probate, upon the contest of any will, the attending physician may testify to the mental condition of the deceased patient and may disclose information acquired by him in his professional capacity. The testimony of the physician may be given freely when the privilege is waived by the patient or withheld by statute. Waiver need not be expressed but may be *implied* by the action or inaction of the patient. If the patient is present in court and does not object to the proposed testimony of the physician, this is a proper waiver of the privilege. "Consent by a patient to the giving of testimony by his physician may be expressly and impliedly given."[12]

Privilege may also be waived in other ways. It is waived, for example, whenever the person entitled to the protection of the statute or the rule voluntarily makes public matters of which a disclosure without his consent would be forbidden.[13] A waiver may also be implied where conduct of the party asserting the privilege has placed the adverse party in such a position with respect to the evidence that it would be unfair to permit retention of the privilege.[14] Where the disclosure is necessary for the protection of the physician or the prevention of an injustice to him, the rule of privilege is also inapplicable. When the physician is being sued by the patient for malpractice, for example, the patient is deemed to have waived his privilege and the physician is no longer bound by the duty of confidence.

Duration of Waiver

The patient may only waive as to prior matters and this waiver does not act as a waiver for privileged communications made thereafter. Thus, the privilege may only be waived to the date of the waiver and any professional confidences thereafter are subject to a new privilege.

This law recognizes what may be termed *limited waivers.* It would behoove the physician thus to de-

termine carefully just what has been waived and to what extent before he risks a violation of the privilege.

To Whom the Privilege Extends

The privilege applies to the patient's relationship only as to licensed physicians. Thus, a Christian Science practitioner has no privilege, for he is not a licensed physician. Nor is there a privilege as to a receptionist, nurse, dentist, medical technician, druggist or prescription clerk, chiropodist, chiropractor or veterinarian. A California case[15] determined that a student intern or nurse is not in the protected physician class and information given them, for the purpose of establishing a hospital record, is not privileged. The intern was acting as an agent for the hospital for the purpose of completing its records and was not acting for the physician. An intern or nurse would, however, be privileged when acting as an agent for an attending physician.

Since the statute conferring the privilege refers to "licensed physicians" an unlicensed practitioner is not within the statute. It has been determined that a licensed physician is within the statute although he has never complied procedurally and registered his license with the County Clerk as is further required by law.

Nonprivileged Areas

A physician is not prohibited by the privilege from disclosing facts not acquired in his capacity as a physician and which are plain to the observation of anyone and demand no professional knowledge. He may testify as to the fact of the physician-patient relationship, to the fact of his attendance on the patient, to the fact of his treatment of the patient, to the fact that the patient was ill, to the duration of his treatment, and to the number of days of the patient's visits.

Who Determines What Is and What Is Not Privileged Information

When the testimony of a physician is sought regarding his professional services, the patient seeking to exclude the testimony on the ground of privilege must assert the privilege if it is to be granted by the court. The patient must establish that the testimony sought was acquired by the physician while the relationship of physician and patient existed and that it was necessary to enable the physician to render professional services. The physician and patient may testify about the status of the relationship. The trial judge makes the legal determination as to whether the information sought is privileged, and in determining this question he may request the physician to divulge information to him out of the presence of the jury. The trial judge has broad discretion in this matter and generally his decision is conclusive. The disclosing of information to a judge in these circumstances is not a violation of professional confidence by the physician.

Psychiatric Examination in Criminal Cases

In California and many other states, communications between a physician and patient are not privileged in criminal cases. But this raises a question in law that has not yet been definitely answered. The ingredients of the question are as follows: In some cases, the law requires a psychiatric examination of a defendant accused of crime. The value of the psychiatrist's report may be impaired if the defendant withholds information. The defendant has a constitutional right to refrain from testifying against himself. From these factors the question arises: Does he lose this right by making admissions against his interest to a psychiatrist who may be called upon to testify?

Rulings by courts on these questions are not in agreement. In Arkansas, a psychiatrist has been permitted to testify to a confession made to him by a defendant.[16] However, in a District of Columbia case[17] it was held that it was error for the lower court to have required the staff psychiatrist at a mental hospital in the District of Columbia to reveal the admissions against interest that were made to him by the defendant. The court placed great emphasis upon the fact that a psychiatrist needs to have a patient's confidence for access to "his entire self, his dreams, his fantasies, his sins, and his shame." The court used this quotation from Guttmacher and Weihofen's book *Psychiatry and the Law* (1952). This decision construed and applied a recent federal statute which reads as follows:

"No statement made by the accused in the course of any examination into sanity or mental competency provided for by this section, whether the examination shall be with or without consent of the accused, shall be admitted in evidence against the accused on the issue of guilt in any criminal case."

Fryer, in *Selected Writings on Evidence and Trial* (1957) at page 259, said:

"The Model Penal Code of the American Law Institute permits testimony by a psychiatrist in any case where mental condition is properly an issue but to safeguard the defendant's rights and to make possible the feeling of confidence essential for effective psychiatric diagnosis or treatment the defendant's statements made for this purpose may not be put in evidence on any other issue."

The author quoted with approval the Taylor case and the federal statute.

Georgia recently has expressly provided by statute that communications between psychiatrist and patient shall be privileged. Massachusetts has recently enacted the following statute:

"In the trial of an indictment or complaint for any crime, no statement made by a defendant therein subjected to psychiatric examination pursuant to sections one hundred or one hundred A of chapter one hundred and twenty-three for the purposes of such examination or treatment shall be admissible in evidence against him on any issue other than that of his mental condition, nor shall it be admissible in evidence against him on that issue if such statement constitutes a confession of guilt of the crime charged."[18]

In California, it would appear that if an attorney engages a psychiatrist to examine a defendant whom he is representing, the admissions made by the defendant to the psychiatrist would be privileged by virtue of the lawyer-client relationship. The physician is acting as an agent of the lawyer.[19]

In no event will representatives of the state be allowed to employ the relationship of physician and patient in a deliberate attempt to obtain a confession out of the defendant's own mouth. This principle is illustrated by a New York case[20] in which the defendant was charged with the murder of his parents. The district attorney sent a physician-psychiatrist to interview him in a police station. The defendant was not informed of the purpose of the visit nor of the fact that the conversation was being recorded on a tape recorder. The physician made deceptive offers of friendship and help, his assurance being given in a pseudoconfidential atmosphere of physician and patient. The court held that representatives of the state may not thus employ a relationship they establish between the doctor and the defendant, which public policy holds privileged, in order to obtain the confession of the defendant without warning. A subsequent confession will be considered as being tainted with illegality also.[21]

Another set of circumstances is that in which a patient who is being treated by a physician is arrested and charged with a crime that may be related to the medical or psychiatric treatments being given. It then might become pertinent at the trial for either the state or the defendant to establish preexisting medical facts relating to mental competency, aberrations and the like. If it should become material to the proof of the crime charged or establishing the criminal intent of the defendant to introduce previous medical facts and admissions, a problem would arise for the physician owing to the defendant's constitutional right not to be a witness against himself. Thus, personal, physical facts in the possession of the physician such as the date of examination or duration of the treatment of the defendant might be introduced, but admissions tending to degrade or incriminate the defendant or knowledge obtained through the use of experimental procedures such as hypnotism might be excluded on constitutional grounds. The previously mentioned New York case involving one Leyra indicates that consideration will be given also to the manner in which the admissions were obtained by the physician.

In California no problem confronts the physician, either in a civil action or in a criminal action, relating to an examination of the defendant made at the request of the defendant's attorney. Where a psychiatric examination of one charged with a crime is required *by the court*, a serious professional and legal problem confronts the physician and the defendant. England has apparently handled somewhat analogous problems by voluntary imposition of genteel considerations. It would appear proper for the attorney for the defendant to request the court to instruct the psychiatrist before he makes his examination that he will not be called upon to reveal admissions of the defendant, on the issue of guilt, without the consent of the defendant. If such a ruling is not granted, the psychiatrist should carefully avoid permitting the defendant to make admissions to him regarding the crime with which he is charged.

Narcotherapy

The use of narcotherapy in criminal cases or otherwise presents some problems. Since a person owns his own thoughts he cannot legally be forced or induced to disclose them. Written permission should be obtained before using narcotherapy. If a recording is to be made, that fact should be agreed on and noted. The confidence of such disclosures should be rigidly observed. When transcripts are made they should be closely guarded and should be destroyed when they have served the purpose for which they were obtained.

RECORDS

Does privilege apply not only to the physician, but to his records as well? The question of whether, in the absence of waiver by the patient, the privilege extends to a medical report, is apparently not one thoroughly settled in law as yet in California. However, there is law to the effect that such records and reports are privileged, and this would seem to be the better view. The problem is raised when the admissibility of a hospital medical record is sought to be prevented on the ground that a hospital record is privileged. In Minnesota an action was filed to recover damages for fatal injuries allegedly suffered by the deceased when his automobile and that of the defendant collided at an intersection; the evidence was conflicting as to whether the cause of death was a blow on the temple inflicted as a result of the collision, or decedent's alleged excessive use of hard liquors for a considerable period of time.[22] It appeared that the decedent died thirty minutes after the accident. It was held that a record of the Mayo

Clinic which decedent entered five months before the accident in question, contained decedent's history, including a statement made by him and recorded in such history, that he drank a pint of whiskey a day, was properly excluded as privileged. In a recent federal case[23] the question was whether a privilege extended to a medical report and was touched upon by the court when the defendant's attorney sought to obtain medical reports which had been prepared by a number of plaintiff's physicians. Defendant sought to submit these reports. The court stated, "We think the documents fell within the privileged statute as interpreted by our decision." Thus the statutory privilege extends not only to information orally given by the patient to the physician, but also to the physician's written records about the patient.

In California, if a patient commences a personal injury suit, he waives his right to secrecy about his medical examination and treatment (as to the injury involved) and this waiver applies also to medical records regarding the injury.

Assuming no waiver, a hospital record which is properly authenticated is admissible to prove nonmedical information about the patient only if there is no disclosure of diagnosis or treatment or comments to that effect by the treating physician. While the cases that have been adjudicated so far have dealt only with the question of privilege as applied to medical reports and hospital records, it may be noted that the physician's office records should also be inadmissible on the basis of their being privileged.

Once a physician is called to the witness stand *by the patient* to be examined concerning the patient's physical condition, the privilege has been waived and the physician may also be required to produce and be examined about any written records which he made about the patient's physical condition.

TYPE OF PROCEEDING

Since in California the privilege statute clearly provides that the physician-patient privilege applies to "civil actions" only, it is interesting to see to what extent the Rule of Privilege has been applied in quasijudicial proceedings and investigations. It applies, of course, in all civil court proceedings whether or not the patient is a party to the action.[24] It has been determined also that the privilege applies to pretrial examination and discovery procedures, to depositions, to contests of wills, to proceedings before bankruptcy or other referees, and to actions of a special kind, such as an action by a physician to recover his fee. Hence, in such actions the physician may testify as to facts of treatment, the value of his services, agreement to pay and the length and number of visits, but he may not reveal, without consent of the patient, the malady or the treatment thereof. Quasijudicial proceedings or investigations may not generally compel revelation of privileged material. These include legislative investigations by federal, state or municipal bodies, proceedings before a grand jury, hearings before tribunals of an admittedly administrative character and proceedings before tribunals of a private rather than a public character, such as those established by fraternal societies.

Thus there are various situations in which the physician may find himself in which he could violate the confidence if he did not know the extent of his duties and rights. The physician could be asked, for example, for information concerning his patient by a private tribunal such as a fraternal benefit society or a union health plan. "Mr. S. has submitted his claim, and we are interested in settling it. Please fill out the submitted forms and return." Would completing these forms violate the confidence even though the physician is attempting to aid Mr. S. to sustain his claim? The answer is that it might unless the physician can show a definite waiver by Mr. S. In the absence of waiver, the physician had better not give information freely to such a body without communicating with Mr. S. to see if he had authorized the completion of the forms. Communication by a phone call is not adequate, for the patient is entitled to see the extent of the forms and what information is sought. It has been held that while fraternal benefit societies are legal and might prescribe their own rules of evidence, they have no right to establish rules contrary to any statute prescribed by the legislature for their guidance and that the statute of privilege is applicable to such proceedings in California. Likewise, health prepayment plans are lawful, but have no right to secure confidential information *except* upon prior consent or request of the patient.

The California Industrial Accident Commission is another body to which a physician must give information regarding a patient who is a claimant before the Commission. In the case of Winthrop vs. IAC[25] the court held that the physician who had examined the claimant and refused to report his findings to the Commission, did so in "the mistaken belief that the law as to privileged communications" permitted him to refuse to testify. The privilege did not apply in this instance, apparently under the theory that the appearance before the IAC was tantamount to the bringing of an action to recover for personal injuries and the privilege was thus deemed waived by the patient.

CONCLUSION

Common sense must be used in determining how to protect the confidence granted and privilege

given. In this field, the law is built upon a framework of overlapping and sometimes conflicting basic policies.

The primary policy is that the courts must be able to compel disclosure of all relevant facts, in order that just decisions may be reached.

To this policy there is an exception in the case of certain confidential relationships, for example those of marriage, religion, law and medicine. To encourage people freely to consult their religious advisor, their lawyer, and their physician, the law has permitted a "privilege" of silence on the part of clergymen, attorney and physician.

In addition to the "privilege" of silence both law and ethics have imposed on physicians an affirmative duty to respect the confidences entrusted to them.

Confidence and privilege are for the benefit of the patient, not the physician. The physician, as such, has no privilege; rather, he has a duty to remain silent. Hence, the privilege is that of the patient, and he has the right to waive it and to command disclosure.

Finally, other policies of the law cut across the rules of confidence and privilege, and when this occurs the duty of silence ceases. Examples are, contagious disease reporting and legally imposed waiver of privilege when a personal injury suit is filed by a patient.

With the rapid growth of health insurance, the instances in which a physician is required to divulge confidential information to a third party have drastically increased. In these cases the patient's economic interests require disclosure. Frequently, his medical interests may call for nondisclosure and hence, a conflict exists.

When a physician is faced with this problem his decision must be made with a clear understanding of the basic fact that confidence and privilege are a right of the patient, and that the patient is the one who must make the decision regarding disclosure or nondisclosure. Neither the physician nor the third party may take away from the patient this legal right.

450 Sutter Street, San Francisco 8.

REFERENCES

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The Work of an Rh Committee

Experiences in a Private General Hospital

BRUCE B. ROLF, *M.D.*, Los Angeles

• **An Rh committee was formed at Saint John's Hospital in Santa Monica to provide preadmission consultation on all potential Rh and ABO problems and to maintain a file of information on Rh-negative patients in the delivery room. It is urged that no patient go to the delivery room without the known Rh-ABO type as part of the labor record. All obstetrical patients at the hospital are given "obstetrical information cards" for use as a memorandum on the labor record. A pink card identifies the Rh-negative patient.**

The program keeps the staff "Rh-conscious" and has improved teamwork among the obstetricians, pediatricians, nurses and the laboratory.

THE CONSULTING SERVICES offered by the Rh Committee at Saint John's Hospital have elevated the standard of obstetric care in the Santa Monica area. This is a liaison committee made up of obstetricians, pediatricians and a clinical pathologist, all of whom have a special interest in hemolytic disease of the newborn. A "home-town" study group, it has served to give local physicians a keen appreciation of the significance of hemolytic disease due to Rh and ABO incompatibilities.

In our community several pediatricians lead the way in educating the medical profession about the Rh factor. One of them, Dr. Gilbert Jorgensen[4] in 1949 established a dependable laboratory for Rh problems and offered a consultation service. He distributed printed instructions for the management of both the sensitized and nonsensitized Rh-negative obstetrical patients. He was aided by Dr. Philip Sturgeon,[10] who now independently operates the Rh consulting laboratory. The late Clement Molony[7] soon presented a two-year report from Children's Hospital on exchange transfusion and the usefulness of the direct Coombs test.

Shortly thereafter the author,[8] representing the obstetrical department, presented a paper on the management of the Rh-negative patient to the hospital staff and also to Section on Obstetrics and Gynecology of the California Medical Association. As the general staff members became more "Rh conscious," obstetricians, pediatricians and the hospital pathologist all gave liberally of their time in regular and "curbstone" consultations. Actually an informal Rh committee had been functioning for several years before one was organized. These individual efforts stimulated the staff to anticipate hemolytic disease and to plan for treatment. For several years the infants most affected by Rh incompatibility were transferred promptly to Children's Hospital, where often blood was ready upon admission because preparations had been made in advance. A program such as this should be established by the staff of every hospital which does not have facilities for exchange transfusion.

Presented before the Section on Obstetrics and Gynecology at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

The narrative might end at this point, except for the fact that not all physicians were able to follow this pattern in every case. As our obstetrical department enlarged, we noted an increasing number of unanticipated cases of jaundice and hemolytic disease. As exchange transfusions were first attempted, sometimes there were delays longer than it would have taken to transfer the infant to another hospital. It became apparent that a more efficient plan was needed.

An Rh committee was formed in 1955 to expedite teamwork among obstetrician, pediatrician, laboratory and delivery room and nursery staffs.

The committee* consists of three pediatricians, two obstetricians and a clinical pathologist. Since lack of communication can disrupt the best laid plans, one of the initial steps was directed to developing a complete file for the labor room of current obstetrical patients whose babies would be potential candidates for hemolytic disease. All obstetricians were requested to submit a report to the Rh committee no later than the 36th week of pregnancy on the following cases:

1. All Rh-negative mothers.
2. All gravid mothers known to be previously sensitized by any other blood factor.

A carbon triplicate form for Rh history has been used to supply the following information to the

*The original committee consisted of: Gilbert Jorgensen, M.D., A. Borden Polson, M.D.,† Nathan Smith, M.D.,‡ Blake Watson, M.D., Bruce B. Rolf, M.D., George Hummer, M.D.§ Replaced in present committee by: †Harvey Shipper, M.D., ‡Nomie Shore, M.D., §Peter V. Van Schoonhoven, M.D.

committee: Name of patient, obstetrician and attending pediatrician; patient's age and expected date of confinement; obstetrical history in detail and report of outcome with special reference to anemia, icterus or stillbirth; Rh and ABO type on both patient and husband, and genotype on husband if the type is known; one antibody titer at least at 34th or 35th week of gestation; previous transfusion history and remarks. There is also space for recommendations by the Rh committee.

The completed forms are reviewed once or twice a week by a member of the Rh committee, who adds his recommendation. Of the triplicate, one copy is returned promptly to the obstetrician; the second, which is for the patient's hospital record, is filed with the delivery room; and the third copy is retained by the committee for the purpose of periodic review.

The following is an outline of the procedures and the rules followed in dealing with the obstetrical cases described above:

I. *Routine tests on the above designated mothers include:*
 1. ABO and Rh typing.
 2. At least one test for antibody titer during the last 5 to 6 weeks of gestation.

II. *Routine tests on infants of anticipated nonsensitized mothers (on cord blood or from baby):*
 1. Rh type.
 2. Direct Coombs test.
 3. Hemoglobin determination.

III. *Routine tests on anticipated sensitized babies:*
 1. Rh and ABO typing.
 2. Direct Coombs test.
 3. Hemoglobin determination.
 4. Serum bilirubin (micrograms).
 5. Blood smear examination.
 6. Reticulocyte count.

IV. *Jaundice of the newborn:*

The nursery staff has been instructed to notify the pediatrician if jaundice appears in the first 24 hours and also to order the following laboratory tests:

 1. Rh and ABO typing.
 2. Coombs test.
 3. Hemoglobin determination.
 4. Serum bilirubin.

The same procedure is recommended for babies showing moderate to severe jaundice at any time during the neonatal period without exception. A reduced laboratory fee is offered for the entire group of tests.

The committee urges physicians to record the ABO typing as well as the Rh on the labor record of all obstetrical patients as an aid in the early evaluation of jaundice of the newborn.

Transfusion Team

Exchange transfusions may be performed only by physicians who have been approved by the Rh committee. Advance notice of the impending delivery should be given to the transfusionist so that he may confirm that the blood bank is prepared to supply his needs.

Laboratory Service

The described program could not have been established without the full cooperation of the director of the laboratory and his staff. Although Saint John's Hospital has not maintained a full time night laboratory technician, a technician on night call has responded to any call for routine Coombs test on infants from Rh-negative mothers. This has become an established procedure in spite of the more lenient initial recommendation that cord blood from nonsensitized cases might be held until 7 a.m., provided that reports were completed by 9 a.m.

Obstetrical Information Cards

In addition, we have borrowed the obstetrical information card from our neighboring institution, Santa Monica Hospital, where its use was initiated by the author as a simple alternate method of informing the delivery room staff not only of Rh incompatibilities, but also of any obstetrical complications. This is a wallet-sized identification card which is given to all patients during pregnancy, and which the patient presents to the labor room nurse on admission to the hospital. On it is recorded the Rh and ABO type, antibody titer, age, parity, preference of analgesia and anesthesia, name of pediatrician and obstetrician and space for pertinent remarks. A white card is used for Rh-positive and a pink card for Rh-negative patients. The card is attached to the patient's labor record and is a conspicuous reminder of the Rh-ABO type as well as of any anticipated complications. In essence, it is a miniature prenatal record for the benefit of the nurses and the physicians, and it is especially helpful if the patient need be delivered by another obstetrician unfamiliar with her history.

This card serves an additional purpose by warning the patient, "*Do not eat solid food even in early labor*" as a safeguard against aspiration during anesthesia.

The idea of the patient's carrying a blood identification card is not new, nor is the use of a simple memorandum for complicated cases. However, the combination of these features with the pink colored

card to identify the Rh-negative patient has made the obstetrical information card a successful means of communicating vital information at the time of labor.

If obstetricians were infallible, in submitting prenatal records to the labor room by the 36th week of gestation, the obstetrical information card would hardly be necessary.

RESULTS

All cases of icterus of the newborn delivered in 1958 at Saint John's Hospital were reviewed by the Rh committee and reported as follows:

Erythroblastosis due to Rh	33	
Erythroblastosis due to ABO	36	69
Icterus—Negative Coombs test result (genetically potential Rh incompatibility)	9	
Icterus—Negative Coombs test result (neither Rh nor ABO incompatibility)	9	18
		87
Stillbirths due to erythroblastosis		5
Total live births		3,905

Twenty-five of the 33 infants with erythroblastosis due to Rh incompatibility received one or more exchange transfusions, but only five of the 36 in whom it was due to ABO incompatibility required transfusion. Of the 36 infants in the ABO group 21 had a positive result of direct Coombs test and 15 had a negative result. This affirms the opinion that close observation of all newborn infants for jaundice by an alert nursing staff is essential for early recognition in nearly half of the cases of hemolytic disease due to ABO incompatibility. There was no mortality or kernicterus among the infants treated by exchange transfusion. The only neonatal death was that of a severely affected 2700-gram infant who died a few minutes following emergency Cesarean section which was done for placental abruptio and fetal distress at thirty-seven and a half weeks' gestation. The advisability of early or premature induction had been considered, in light of a history of four consecutive stillbirths following the birth of the first child. However, this was not done because the expected date of confinement was uncertain.

DISCUSSION

Every general hospital accepting obstetrical patients should offer around-the-clock laboratory service for the prompt diagnosis or exclusion of hemolytic disease. The obstetrician should have a feasible plan to transfer an affected infant within an hour after birth to an adequate facility should an exchange transfusion not be immediately available, or arrange for the patient to be delivered where such a facility is available.[9]

Early induction of labor or Cesarean section is not recommended in cases of isoimmunization except when repeated stillbirths have occurred, and then only after studied consultation. Preadmission consultation with the transfusionist in every case of known Rh-sensitization is desirable. Should elective pre-term induction of labor be contemplated, it is advantageous to select a date favorable to the pediatrician and to plan the time of delivery during the daylight hours when a full staff of trained personnel is available. As an additional advantage of preadmission consultation, the transfusionist may confirm in advance that there is a supply available of comparatively fresh Rh-negative blood which is compatible with the serum of the infant's mother.

The Rh committee currently is reviewing the unclassified cases of icterus neonatorum for etiological factors.

It is now evident that vitamin K in large doses may produce hyperbilirubinemia, kernicterus and even death in premature infants.[1,5] Since placental transmission of vitamin K has been established,[3,6] its routine administration to mothers in labor to protect the infant from possible hypoprothrombinemia should be reevaluated by every obstetrician. Its use certainly should be avoided if labor is premature or delivery imminent.[2] Adequate protection of the infant can be safely accomplished without risk of bilirubinemia,[2,3] by giving 1 mg. of vitamin K parenterally at birth.

12300 Wilshire Boulevard, Los Angeles 25.

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Visualization of the Biliary Tract

Preoperative, Operative and Postoperative Radiologic Investigation

C. ROLLINS HANLON, M.D., St. Louis, Missouri, and C. ALLEN WALL, M.D., San Francisco

• **Modern operative treatment of diseases of the bile passages requires the use of x-ray visualization of the biliary tract before, after and during operation. Nearly every surgeon uses x-ray study of the biliary tract before operation and it is widespread practice to carry out such study after operations in which a tube has been placed in the bile passages. However, there is a remarkable aversion to operative cholangiography.**

The usual reasons for avoiding operative cholangiography are unfamiliarity, inertia, concern over complications of the technique, and the feeling that it is unnecessary or wasteful of surgeon's time and patient's money. Yet the results of operative cholangiograms compare favorably with those obtained with the more customary x-ray studies of the bile ducts carried out after operation, at a time when the information gained is much less valuable in avoiding additional operations and in contributing to a smooth and rapid convalescence.

DISEASE OF THE extrahepatic biliary tract is so common and its diagnosis so important that every physician should recognize the various clinical forms of the disease and appreciate the place of radiologic visualization in its management. Although not every patient with extrahepatic biliary disease is a candidate for operation, it has been customary to consider radiologic investigation under the categories of preoperative, operative and postoperative roentgenography.

The traditional management of a patient with cholecystitis and cholelithiasis would start with preoperative investigation by oral cholecystography. During the operation itself, operative cholangiography might be used and in the postoperative period visualization of the extrahepatic biliary tract could be accomplished by cholangiography before removal of a T-tube in the common duct. Recently these divisions of radiologic investigation according to their relation to operation have been rendered less clear cut by the use of intravenous cholangiography for preoperative and postoperative biliary tract visualization and the use of newer oral cholecystographic methods in competition with intravenous cholangiography for postoperative investigation. The use of percutaneous puncture of the liver or gallbladder (a form of operative cholangiography) for preoperative visualization of the extrahepatic biliary system is mentioned only to condemn it.

It is the purpose of this presentation to discuss the various methods for roentgen visualization of the extrahepatic biliary tree with certain clinical observations on the advantages and disadvantages of each technique.

Oral Cholecystography

This 35-year-old technique was originally employed to demonstrate the presence of pathologic change in the gallbladder, especially calculous cholecystitis. Although Graham and Cole in their original comments on the method suggested the probability of improved agents, these were slow in being developed and for many years the original tetraiodophenolphthalein (Iodeikon®) was employed despite a relatively high incidence of adverse gastrointestinal reactions. This agent was gradually supplanted by iodoalphionic acid (Priodax®) which was much better tolerated but is inferior to more modern agents such as iodophenoic acid (Teridax®) and iodopanoic acid (Telepaque®). As with all iodine-containing compounds, certain side reactions may occur even with these newer agents, but such reactions are uncommon and are rarely dangerous.

With the standard dose of iodopanoic acid, it is quite common to visualize the extrahepatic biliary ducts together with the gallbladder. Even if the gallbladder is not visualized, as in patients with obstruction of the cystic duct, the extrahepatic bile ducts may be shown some 12 hours after oral administration, particularly if a double dose of the agent is given.

This high-contrast property of the newer agents may be helpful in distinguishing between liver disease and gallbladder disease. In liver disease, failure to visualize the extrahepatic biliary tracts may be occasioned by failure of excretion. In gallbladder disease, however, the radiopaque material is prevented from entering the gallbladder even though it is excreted in adequate concentration by the liver.

Guest Speaker's Address presented before the Section on General Surgery at the 88th Annual Meeting of the California Medical Association, February 22 to 25, 1959, San Francisco.

Professor of Surgery and Director, Department of Surgery, St. Louis University, St. Louis 4, Missouri (Hanlon).

In one series of 67 patients with nonvisualizing gallbladder, the common bile duct was seen radiologically in over 70 per cent.

For years it has been customary in the use of oral cholecystography to withhold fat in the diet on the day preceding the examination. In patients who for a long time have been on a rigid fat-free diet, the gallbladder occasionally fails to concentrate the radiopaque agent because it is already filled with inspissated bile at the time it is ingested. It was observed that in certain patients whose gallbladder had been stimulated to empty by the customary fatty meal after the initial roentgenogram, the gallbladder would be visualized as an accidental finding during other abdominal roentgenograms 12 to 24 hours later. Thus there is considerable logic in the practice of requesting patients to take some fat-containing food on the day preceding the oral cholecystography in order to empty the gallbladder and have it fill with bile containing the ingested radiopaque agent.

The older agents for oral cholecystography not infrequently failed to delineate the gallbladder even when there was no pathological change in that organ. This led to the practice of repeating an unsuccessful test, using a double dose of the agent. This practice is occasionally employed even with the newer agents such as iodopanoic acid. Within the past two years, a further extension of this trend has led to administration of 1 gm. of iodopanoic acid after each meal for as long as four to seven days, with the patient maintained during this period on a fat-free diet. Paregoric is given frequently to control occasionally troublesome diarrhea. In such circumstances, the visualization of radiolucent stones may be achieved not only in the gallbladder, but in the common bile duct as well. In vitro and in vivo studies have shown that certain biliary calculi may concentrate the cholecystographic medium in layers of biliverdin at the periphery of the stone, giving a ring-like appearance which stands out prominently. More commonly, in our experience, the stones are demonstrated by negative shadows in the duct. This may occur even in the presence of jaundice.

Further laboratory studies and wider clinical application of this technique of repeated dosage of the oral cholecystographic agents will permit more precise final evaluation. It is possible at this time to say that the method offers considerable promise in the appraisal of that troublesome group of patients with persistent symptoms after cholccystectomy. In some instances, the technique is more effective than intravenous cholangiography in demonstrating retained common duct stones after operation.

While it is not the purpose of this presentation to discuss fine points of radiologic technique, it should be stressed that one must always be sure that the tablets have been ingested and that there has not been vomiting or diarrhea. In the absence of severe depression of hepatic function, failure to visualize the gallbladder with iodopanoic acid indicates disease of the gallbladder. Although the degree of gallbladder disease cannot be predicted from the density of the shadow, a faintly visualized gallbladder suggests strongly the presence of cholecystitis. It is worth remembering that the use of iodopanoic acid by the standard technique may give shadows of such density that radiopaque stones can be missed unless adequate scout films are taken.

Intravenous Cholangiography

Although the widespread use of intravenous agents for contrast visualization of the biliary tree did not begin until 1953, it should be remembered that early in the history of cholecystography the one available agent, tetraiodophenolphthalein, was not infrequently given intravenously when oral administration was ineffectual or poorly tolerated. In 1953, sodium iodipamide (Cholografin®, Biligrafin®) was introduced by various European investigators. Even with careful slow injection, the incidence of adverse reactions varies from 10 to 20 per cent. These generally consist of gastrointestinal symptoms such as nausea and vomiting or allergic manifestations such as urticaria, itching, and occasionally bronchospasm. Serious reactions, however, are rare.

The main utility of intravenous cholangiography lies in investigation of patients with persistent symptoms after cholecystectomy. In most of these patients, the common duct can be demonstrated fairly clearly although in half of such patients, the important lower end of the duct is not demonstrated, which limits sharply the value of the method. Moreover, with severe impairment of hepatic function or with serum bilirubin above 5 mg. per 100 cc. the likelihood of visualization of the common duct is small.

The density of the shadow with serial films may be used as an indicator of obstruction in the common bile duct. If the density of the shadow after intravenous cholangiography is greater at two hours than at any preceding time, this may indicate significant blockage of the common duct. The nature of this obstruction remains nonspecific until exploration distinguishes between calculi in the duct and obstruction at the sphincter due to fibrosis or neoplasm.

Although intravenous cholangiography may give valuable information after failure of biliary visualization by the usual oral cholecystographic techniques, it is not to be considered as a substitute for oral cholecystography. The incidence of unpleasant

side reactions is definitely higher with the intravenous than with the oral technique and, as previously noted, the newer oral methods may demonstrate otherwise invisible radiolucent calculi that are missed even with intravenous cholangiography.

It is essential to introduce a word of caution against relying too heavily on radiography alone in diagnosis of biliary disease. Frequently the clinical symptoms are clearly diagnostic of gallbladder disease and additional laboratory studies serve only to harass the patient and increase his expenses. Moreover, such studies may dangerously delay an operation which is urgently needed.

A case in point is that of a young woman recently seen with the classical symptoms of empyema of the gallbladder. She was treated nonoperatively with antibiotics for a long period when cholecystostomy would have relieved the symptoms and doubtless favorably affected the septicemia resulting from empyema. Thereafter she was submitted to oral cholecystography with single and double dosage and intravenous cholangiography. None gave visualization of the biliary system. Finally, some two months after studies were begun, a successful demonstration of nonopaque stones in the gallbladder was achieved by administration of iodopanoic acid for four days. Three days after this diagnostic triumph, there was violent exacerbation of the inflammatory process in the gallbladder, which was palpable, and the patient was transferred to the surgical service for emergency cholecystostomy. It seems unnecessary to labor the moral of this story, which exemplifies the overemphasis of diagnosis to the exclusion of the patient's best interests.

Operative Cholangiography

Operative cholangiography is generally discussed in surgical journals, but there is merit in outlining its usefulness and indications before a wider medical audience. Although operative cholangiography has been in use for at least 20 years, many surgeons are still reluctant to employ it. Failure to use the method is based on a variety of objections which may be valid in some instances but are generally an indication of inertia. It is remarkable that many surgeons who avoid the use of cholangiography during operation will employ it to demonstrate the bile ducts several days or weeks after operation at a time when correction of abnormalities will ordinarily require a second laparotomy. In contrast to this, the demonstration of abnormalities at the time of initial laparotomy permits correction of them with minimal morbidity and lessens the expense and trouble of prolonged stay in hospital.

It has been said that the use of operative cholangiography is unnecessary if one is skilled in operative exploration of the common bile duct. While the degree of skill obviously varies from surgeon to surgeon, there is no one so skilled that he does not occasionally fail to find a stone which subsequently manifests its presence in the common duct. Even the most skillful probing and irrigation may fail to detect or bring into view stones that are present in the intrahepatic radicles of the biliary ductal system.

Operative cholangiography has been said to be dangerous because it gives assurance which is not justified by the results obtained. The answer to this objection lies in the fact that operative cholangiography is not a substitute for common duct exploration, but is rather a supplementary technique of examination which may be carried out after the most meticulous exploration, which will sometimes fail to reveal stones. Exploration of the common duct by manipulative methods and roentgenographic methods are complementary, not each exclusive of the other.

Operative cholangiography has been attacked because it is troublesome to do and because there are both false negative and false positive cholangiograms in a certain proportion of cases. The trouble and expense of operative cholangiography have been somewhat overrated and the additional expense is trivial when compared with the catastrophic hospital bills incident to surgical treatment of retained common duct stones. It is apparent that technical difficulties are always a possibility, but these may be solved if one has in view the desirable goal of avoiding even one retained common duct stone. For best results, the cooperation of the radiologist is obviously essential; however, operative cholangiography even under technical and consultative difficulties is more helpful than no cholangiography at all.

The most significant and cogent reason for using operative cholangiography lies in the demonstration on our own material that 8 per cent of the patients who were judged by all other available methods to have extrahepatic biliary ducts free of stones, were found by operative cholangiography to have stones in the biliary ducts. In these patients, the responsible surgeon had exerted diligent efforts to detect stones by all practical means short of operative cholangiography. Except for operative cholangiography, stones would have been left behind. This would not necessarily have occasioned symptoms since patients with stones in the common duct may be fortunate enough to pass them with negligible clinical disturbance. Moreover, it is possible that a nonoperative regimen designed to cause passage of common duct stones may be successful. One can scarcely escape the conclusion that in a significant number of patients the use of operative cholangiography gives information which is not available in any other way and that this information is beneficial to the surgeon and to the patient.

One form of operative cholangiography mentioned earlier is the blind percutaneous injection of radiopaque materials into the gallbladder or intrahepatic bile ducts. It is our belief that this is a dangerous and unwarranted practice. We treated surgically four patients with biliary peritonitis or intraperitoneal hemorrhage that resulted from such tests. These four complications occured in a group of 15 patients so tested, and in no instance among the four patients was the diagnosis materially aided by the study. Certain South American observers have reported the use of pneumoperitoneum to delineate the gallbladder so that it may be punctured more readily, but this too seems to be an instance of diagnostic ingenuity exceeding common sense and regard for the patient's safety. In an occasional case of jaundice where radiographic visualization of the ducts is essential and cannot be achieved short of direct injection, this may be safely done by exposure of the gallbladder through a short laparotomy incision under local anesthesia. This is a major diagnostic effort but it has the advantage of direct closure of the puncture wound in the gallbladder and the comfortable realization that the added surgical manipulation has been justified by the diminished risk of biliary peritonitis. In this sense, it is comparable to the conventional postoperative cholangiography through an inlying tube placed in the gallbladder at a formal cholecystostomy.

We have had no personal experience with air contrast cholangiography suggested recently by Bertino and Cole.[1] Their preliminary report based on use in 17 patients indicated only that it was feasible, safe and useful.

St. Louis University, 1325 South Grand Boulevard, St. Louis 4, Missouri.

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For Your Patients—

A Personal Message to YOU:

As your personal physician I consider it both a privilege and a matter of duty to be available in case of an emergency. But, being only human you can understand that there are times when I may not be on call. I might be at a medical meeting outside the city, on a bit of a vacation—or even ill.

Consequently, I thought it would be a good precaution if—on this gummed paper which you can paste in your telephone book or in your medicine cabinet—I listed numbers where I can be reached at all times. Also, the number of a capable associate as an added service. Here they are:

_____	_____	_____
OFFICE	HOME	MY DOCTOR
_____	_____	_____
OFFICE	HOME	ASSOCIATE

Sincerely,

_____, M.D.

MESSAGE NO. 1. Attractive, postcard-size leaflets printed on gummed paper, you ta fill in telephane numbers and yaur signature. Available in any quantity, at na charge, as anather service ta CMA members. Please arder by Message Number fram CMA, PR Department, 450 Sutter, San Francisca.

Periodic Medical Examinations

Disease Detection and Health Promotion

RODNEY R. BEARD, M.D., San Francisco

• **The medical examination of persons who have no medical complaints is a procedure that has different purposes than the traditional diagnostic examination. These include not only the detection of incipient disease but the evaluation of the adjustment of the individual to his environment and an assessment of his personal hygiene. It should be concluded by a discussion of what has been found, and by positive, persuasive advice and education which will lead to better health.**

Interest in such work and competence for it are not found in every physician. Physicians who do not want to acquire such competences should recognize the fact and refer such work to others who are prepared to cope with it. Inept, incomplete health examinations disappoint the patient and make the physician uncomfortable; thorough, constructive examination and counseling is satisfying and profitable to both.

ONE OF THE PARADOXES of modern medicine is the widespread advocacy of periodic health examinations and the limited extent to which they are practiced. Although Mock[3] introduced health examinations for industrial employees in 1909 and the American Medical Association as early as 1925 published a manual of procedures for such examinations,[1] they remain unaccepted by a majority of physicians and the great mass of the public. Their importance has been restated by an eminent group of experts representing the leading professional associations of the health field, The Commission on Chronic Illness, as follows:[2]

"All persons should have a careful health examination including selected laboratory tests at appropriate intervals. The medical and dental professions must specify the desirable scope and frequency of this examination, taking into account age, sex and other biosocial factors. Such examinations must then be made practical and realistic and be incorporated in the day-by-day practice of modern medicine and dentistry."

The reasons for the lack of more general acceptance of health examinations lie in misunderstandings of their potential benefits, the applicable methods and the costs involved. In too many instances, those who have advocated them have overstated the benefits which may be derived. On too many occasions, health propagandists have excited the interests and expectations of the public with resultant embarrassment of physicians who did not honestly feel that they could achieve the results which were expected. A striking example of this is the frustration and annoyance felt by the physician who is approached by a person who wants reassurance that he does not have cancer. The physician, knowing too well how difficult it is to detect many internal cancers while they are in an operable stage, is anxious lest a statement that he can find no cancer will be interpreted as a guarantee that none exists. At the same time he knows that anything less than hearty reassurance may provoke anxiety. The physician is likely to be particularly annoyed if the patient expects him to give this reassurance without benefit of x-ray and laboratory examinations.

A more widespread cause of disenchantment for the physician is the experience of performing examinations in military or industrial settings where he observes that, with the methods commonly in use, the proportion of remediable defects which he discovers is discouragingly small for the amount of time spent.

On the side of the public, it has been observed that many persons are reluctant to accept medical examinations even when they are offered free of charge, in circumstances which should give assurance of high quality. "If there is something wrong with me, I don't want to know it," is a fairly common attitude.[2] Among those who have ventured to undergo a health examination, a common complaint is, "The doctor just said I was all right; he really didn't tell me anything."

The effective performance of health examinations can be increased if recognition is given to the fact that there are two essential phases, namely, disease detection and health counseling. Moreover, physicians will approach this work with more satisfaction to themselves and to their patients if they recognize that there are some special techniques which are applicable. The physician should be aware that a satisfactory health examination is not an easy chore,

Presented before the Section on Industrial Medicine and Surgery at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

that it is time-consuming, and that the essential laboratory work associated with it is not cheap. The physician must set a high standard and adhere to it. There is no more excuse for 15-minute "physical check-up" than there is for kitchen-table appendectomy or the use of leeches. Patients must be taught that a good health examination is worth a good price, and a poor one worse than none.

Many physicians remain dubious about the value of periodic examination as a means of detecting remediable disease. They urge that public health education should be directed toward convincing people that they should go to a physician promptly when sick, and they protest that periodic examinations tend to deter this, rather than to encourage it. Mainly, they claim that the time and energy invested in examinations of supposedly healthy persons is disproportionate to the benefits derived. Many physicians who have tried diligently to give thorough examinations have been disappointed by the infrequency with which they detect significant abnormalities that can be corrected. Some physicians believe that if there is disease for which one has no specific remedy to offer, the patient is better off to live in ignorance until manifest symptoms make him seek palliation.

A number of studies, reported by Roberts[5] in Hubbard's recent book have shown tangible rewards. As should be expected, there is wide variation in prevalence rates of detectable disease in different segments of the population. From among the disorders which are unequivocally benefited by early detection and treatment, the following partial list can be made:

Kind of Disease	Incidence Range, Various Studies (Per Cent)
Tuberculosis	0.09 to 0.37
Syphilis	0.5 to 12.5
Diabetes—	
Urine sugar tests	0.8 to 2.3
Blood sugar tests	1.3 to 6.7
Glaucoma (persons over age 40)	2.0[4]
Carcinoma—	
Anus, rectum, sigmoid	0.13 to 0.39
Uterine cervix (cytologic smears)	0.33 to 0.71
Rectal and sigmoid polyps and adenomas	3.0 to 17.2
Anemia	3.9 to 16.2

In addition, it is apparent that many neoplasms of the skin or body orifices are benefited by early treatment and are readily detectable. Infections such as amebiasis and hookworm infestation are worth seeking in some population groups.

Although the available means of therapy are not perfectly satisfactory, we are beginning to understand the control of arterial hypertension and know something about the prevention of exacerbation of latent nephritis. The frustrations of attempting to correct already established obesity make most physicians avoid such patients whenever possible. However, the incipient obesity of early middle age can be controlled in many cases.

In persons without complaints or symptoms, it is evident that the medical history cannot play a very important role in the detection of disease. Thoroughness of physical examination and a wide array of laboratory tests have been shown to be more productive.[4] This has led to some rather sharp divisions of opinion and practice. On the one hand are the physicians to whom disease detection is the sole end of periodic examination. On the other are the physicians who see the opportunity in such examinations for influencing the behavior of individuals toward better health practices. For the former group, the physical and laboratory examinations are of greatest importance. For the latter, a very detailed history must also be taken.

The discovery of disease before the patient has become aware of it calls for greater perceptiveness than the diagnosis of manifest illness, although it may not require the same degree of skill in piecing together bits of information. The skills used in detecting a significant abnormality are not exactly the same as those applied in finding the underlying cause of that abnormality. In the first instance, attention is centered on health; in the second, on disease. It is quite possible for the two viewpoints to be held by one physician, although not simultaneously. A number of practitioners are able to shift from one role to the other with ease, but there remain many who can deal only with the identification of causes of recognized illness, and a few who are satisfied to recognize the presence and general nature of abnormalities, leaving definitive diagnosis to others. These differences are unimportant, so long as the physician recognizes his own field of interest and his limitations.

A primary skill in detecting abnormalities is the ability to evaluate the health history. This ability requires knowledge of the broad range of healthy variation in the human species, and perception or understanding of the ability of the individual to feel pain or other symptoms and to express himself. Such understanding of an individual depends much upon knowledge of his background, including his heredity, his childhood family environment and his subsequent life experience. Thus the family history should be more than a listing of causes of death of grandparents, presence or absence of specific diseases in parents, siblings and so on. It should bring out personality characterizations of parents and family associates, and the feelings of the patient about his early home. The developmental, social and vocational histories, and the review of recreational interests, food intake and daily habits all provide clues to the kind of person with whom

one deals. Many of these details are also required as a basis for the discussion of personal hygiene.

In theory, the physical examination of the well person does not differ from that of one with a presenting complaint. Both examinations should aim at a complete description of every accessible part of the body, and of the organism as a whole, including functional characteristics and patterns of behavior. In practice, when examining a person with a presenting complaint, one usually forms some diagnostic impressions from the history. One organ system or body region is suspected as the source of trouble. The physical examination is pointed toward the refinement of these impressions and the confirmation of a diagnosis. Minor deviations which are not part of the main syndrome either are not looked for or are ignored as mere incidentals. Neither the patient nor his physician is likely to be concerned about details of the nose and throat when the complaint is one of acute abdominal pain, nor about the condition of the knee joints when the complaint is headache. In examining the person who has no complaint, it is not often that a significant deviation is obvious. Close attention to detail and systematic thoroughness are necessary to bring out the clues which lead to significant findings.

When one turns to the laboratory, it would seem that every possibly fruitful test that can be done without discomfort or risk to the patient should be applied. In addition, there are procedures that are uncomfortable but not hazardous, and others in which there is some inescapable risk of injury. To a large degree, money factors and the established practices of diagnostic medical practice set the pattern. Blood examination for hemoglobin, a count of erythrocytes or hematocrit determination, a leukocyte count and examination of a stained smear is so widely accepted a part of "a complete examination" as to be mandatory. Similarly, a urine specimen must be tested for protein and sugar, and microscopic examination of the sediment can hardly be neglected. A serological test for syphilis must be done on each initial examination. An x-ray film of the chest completes the minimal list. Beyond these, especially for persons approaching middle age and older, an electrocardiogram and determination of blood cholesterol and sedimentation rate are valuable as base lines for future comparison. Also, a determination of postprandial blood sugar content is useful. A specialized physical examination procedure to be considered is the measurement of intraocular tension or visual fields. In some occupational groups, an audiogram should be thought of.

In the absence of history or physical findings suggestive of trouble, one is hardly justified in more elaborate, expensive, uncomfortable, sometimes risky procedures, such as gastrointestinal x-ray studies, gall bladder visualization and phenolsulphonphthalein excretion tests.

When the examination is completed, and preferably after laboratory data are in hand, the results should be discussed with the patient.

The negative aspects of the physician's report to the patient can be disposed of quite readily. Too often, the physician goes no further. The positive part is advice for the conservation and promotion of health. First, the physician has to list in his own mind all the points of advice that might be pertinent and rank them in importance. He must then decide which of these the patient is prepared to accept, and how many he can undertake at one time. Then he must communicate to the patient what is to be done, why and how.

The range of advice that may be given is very broad. It must include urging additional special laboratory tests or consultation with specialists if inconclusive evidence of disease has been found. If a definite diagnosis of disease is made, treatment must be prescribed or the patient must be referred to another physician. Education concerning diet, exercise, rest, recreation and any of the other elements of hygiene may be required. Recommendations for limitation of activity may have to extend to consideration of a change of occupation. Attitudes toward spouse, children, employer or employees may need discussion.

The physician acting as a health counselor may use oral discussion alone, or may supplement it by various written or graphic materials, including pamphlets available from governmental and voluntary health agencies and from life insurance companies. Individual ingenuity and skill have wide play in these educational methods. It may also be desirable or necessary to give the patient a written summary of advice which he can show to his wife or employer as an aid in putting the recommendations into effect. Such a summary should be neither a clinical report nor merely a certificate of good health.

Stanford University School of Medicine, San Francisco 15.

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Nonsurgical Treatment of Convergent Strabismus

ROBERT L. TOUR, M.D., San Francisco

• It is generally agreed that surgical treatment of convergent strabismus should be withheld until all other less traumatic approaches have proved ineffectual. There are four categories of nonsurgical treatment.

One is psychiatric. Too often psychiatric problems in the causation of convergent strabismus are either overlooked or unrecognized.

Another is the proper employment of optical devices. For example, spectacle lenses to eliminate the need for excessive accommodation with its associated convergence excess, and the employment of prisms in the lenses to permit the two eyes to see as a unit even though they may not be properly anatomically oriented.

Another kind of treatment is orthoptics, the use of exercises and rather complex optical equipment in a laboratory to train the patient in coordination between the two eyes.

Treatment with drugs is based on the fact that certain drugs reduce the effort necessary for accommodation (much as eye-glasses do) and therefore lessen the stimulus toward convergence which may possibly tend toward the development of convergent strabismus.

ASSUMING THAT MANY if not most of the underlying principles of the conservative treatment of convergent strabismus are well understood and are in ordinary ophthalmologic practice, I wish particularly to stress two relatively recent trends in nonsurgical management: (1) the use of miotics, and, (2) pleoptics. I would also like to discourage the use of the term *strabismus* in referring to manifest deviations. As Scobee[11] says ". . . heterotropia brings the manifest deviations into a clearer relationship with their cousin, heterophoria [whereas] *strabismus*, to the uninitiated, sounds as if it had no relationship with the widely known heterophoria." From a more practical standpoint, *esotropia* is much more succinct than *convergent strabismus*, and is most certainly easier to say.

The treatment of esotropia, whether surgical or nonsurgical, should be directed toward some specific goal, and this goal, at least at present, is so-called "functional cure." Acording to Costenbader[5] the end result should include (1) the best possible vision in each eye, (2) the best possible binocular alignment with harmonious movements and (3) the most secure single binocular vision possible. This therapeutic ideal is achieved in only some 10 per cent of patients even under optimal conditions. Some ophthalmologists maintain that a small-angle esotropia with good cosmesis and freedom from heterophoric asthenopia is a more than adequate substitute, but it would seem that this falls short of the delicate interocular balance that nature intended.

There is room for considerable debate as to when one should acknowledge that the nonsurgical treatment appears to have fallen short and operation is in order. Duke-Elder[7] said that "if a case is not practically cured with occlusion (or atropine), spectacles and orthoptic exercises within six months it is usually uneconomic to persevere without surgical intervention." As to prolonged visual training, Javal[9] said that he agreed with von Graefe in that the gain to the individual was not worth the trouble.

The nonsurgical treatment of esotropia can logically be subdivided into four distinct, although interrelated, categories:

1. *Psychiatric.* This approach is based upon the frequent relationship between changes in the degree of tropia, and variations in the emotional status of a given individual. Perhaps the word *psychological* should be substituted for *psychiatric* in view of the more sordid implications of the latter.

2. *Mechanical.* Optical devices worn by the patient to change the direction or intensity of light rays entering the eye are frequently employed—occlusive devices, spherical and cylindrical lenses and prisms, for example.

3. *Sensory.* In this category emphasis is placed on the more central as opposed to the peripheral aspects of tropia. Javal[9] in 1896 stated that squint was primarily a fault of binocular function and could be remedied through the use of the stereoscope. Until recently, sensory treatment—"orthoptics"—has been directed toward binocular function; little attention has been paid to improvement of visual acuity in the deviating eye, except for total or partial occlusion of the unaffected eye. In "pleoptics," primary attention is given to visual improvements in an amblyopic eye, but secondary benefits regarding both position and binocularity also accrue.

4. *Pharmacological.* Treatment with drugs is in essence a mechanical approach to the problem of esotropia, except that the structure or function of

Assistant Clinical Professor of Ophthalmology, University of California School of Medicine, San Francisco 22.

Presented as part of a Panel Discussion on Strabismus before the Section on Eye at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

the eye is altered by the use of drugs rather than by the changes in light-wave pattern that are brought about by lenses of various types.

Psychological Treatment

Most ophthalmologists are aware of the effect of periods of emotional unrest upon the relative position of the visual axes. Too frequently, however, this influence is disregarded in an attempt to reduce the problem to its simplest form and thereby better the chances of a permanent cure. Campion[4] mentioned that such oversimplification may act adversely in certain patients inasmuch as surgical treatment, *per se*, may have much psychotherapeutic value and the danger of overcorrection is therefore great. Conservatism is to be advocated in the presence of a large functional factor.

Mechanical Treatment

The mechanical treatment of esotropia is directed toward the achievement of the best possible visual acuity in each eye and the best possible alignment of the visual axes. Total or partial occlusion of the better, or fixating, eye is employed in an effort to improve vision in the deviating eye. This is done with the aim of equalizing acuity and thus creating a situation in which there is greater likelihood of functional cure.

Since fusional requirements are best met when the retina receives the clearest possible image, full correction of astigmia and myopia should be ordered at the outset. In the case of myopia, no harm and often some benefit will accrue from the elimination of minus power for close work. In dealing with hyperopia, in which visual clarity may exist throughout wide ranges of refractive error, correction is not directed to acuity but to the elimination of the accommodative component of the "near reflex." Full hyperopic correction provides maximal visual acuity with minimal accommodative stimulus. The less the accommodative effort, the less the associated convergence; and the less the convergence, the less the tendency toward esotropia.

The foregoing does not imply that all cases of esotropia are due to uncorrected hyperopia, or conversely that esotropia cannot be present in the absence of hyperopia. As Sheard[12] said, assuming an interpupillary distance of 65 mm., 19.5 prism diopters of convergence must be supplied to maintain single binocular vision at 13 in. (33 cm.) should orthophoria obtain at distance. Inasmuch as the normal AC/A (accommodative convergence/accommodation) ratio is about 4:1, only 4 times 100/33, or approximately 12 prism diopters of convergence, results from the accommodative effort involved. Sheard referred to this disparity as "accommodative exophoria," which is overcome by other stimuli such as fusional convergence. If in a given case orthophoria at distance could be brought about by means of eye-glasses, one might expect to find single binocular vision at near, provided that both fusion and the AC/A ratio were relatively normal. However, should the AC/A ratio be such that much more than average convergence is produced by a given amount of accommodation, the result may be esotropia for near in the face of orthophoria for distance. In such a situation, bifocal lenses are of value because, while they do not alter the basic AC/A ratio, they reduce its effect upon the ultimate relative position of the visual axes.

Perhaps the best known exponent of the use of prisms in the treatment of esotropia is Guibor.[8] He stresses undercorrection of the deviation in order to stimulate fusional amplitude in the divergent direction, which in turn results in lessening of the degree of esotropia. He also emphasizes the proper method for determining the amount of deviation: the Maddox rod should not be used because it stimulates accommodative convergence, and the alternate cover test should not be employed because it measures both tropia and phoria simultaneously.

Sensory Treatment

As previously mentioned, the sensory method of treatment of esotropia has been primarily directed toward binocular function. Orthoptic exercise, as we now know it, consists of active binocular stimulation of corresponding retinal elements. The first step is to eliminate anomalous retinal correspondence, which is quite difficult if the angle of anomaly is small. Next, an attempt is made to overcome suppression of image, the purpose being to reestablish awareness on the part of the patient of any abnormal deviation between the visual axes. Finally, attention is given to improvement of fusional amplitudes so that comfortable binocular vision that records a single image can be maintained in the face of rather wide fluctuations in relative visual direction.

Proper use of orthoptic treatment obviously depends on a rather exact knowledge of just when corresponding retinal points are being stimulated. Further, since the fovea is commonly used as a reference point, it follows that the therapist must ascertain whether there is true foveal fixation or eccentric fixation. It is usually assumed that, when an amblyopic eye takes up fixation it is doing so with its fovea, and measurements are made on the basis of the cover test and/or the corneal light reflex. Considering that eccentric fixation may be of very small degree, these methods are too gross for accurate evaluation. Further, treatment in which the unaffected eye is occluded in an attempt to improve the vision in the squinting eye is based on the assumption that there is foveal fixation in the squinting eye.

Often no improvement in visual acuity is obtained. "Pleoptic" treatment attempts to overcome the hurdles of amblyopia ex anopsia and eccentric fixation. The premises of the treatment are:

1. Equal acuity in both eyes is paramount in the establishment of single binocular vision.

2. Defective vision in the deviating eye is most commonly the result of eccentric fixation.

3. Occlusion of the fixating eye reinforces eccentric fixation in the other; hence visual acuity fails to improve and further therapy is more difficult.

4. Eccentric fixation can be converted to foveal fixation through adequate training. This is based, first, on foveal recognition and, second, on visual-manual coordination.

The first premise, that relating to the importance of equal visual acuity in both eyes, is not subject to serious challenge. As to the relationship between defective vision and eccentric fixation, two of the cases reported by Mayweg and Massie[10] are of interest. In both of them esotropia was observed during the first few months of life and the ordinary occlusive techniques were carried out with no success. At age five, both patients had vision poorer than 20/200 in the deviating eye, and both had eccentric fixation (as observed by apparatus to be described later in this communication). After pleoptic treatment both patients had 20/20 vision and foveal fixation. Mayweg and Massie suggested that the low visual acuity in these patients before treatment was due to eccentric fixation and the poor resolving power of the eccentrically fixing retinal point, a point which had been reinforced by occlusion of the better eye.

Regarding the effects of ordinary occlusion, Mayweg and Massie[10] said: "Better and quicker results were obtained in those patients who had not had any previous occlusion, even when the fixation was sufficiently eccentric to be diagnosed by cover test alone." Von Noorden[13] emphasized the importance of occluding the *deviating* eye. He observed the return of suppressed visual function when such conditioned stimuli for suppression as bright light were excluded. Von Noorden also made note of the extraordinary capabilities of even highly amblyopic eyes to fixate foveally in dim surroundings.

The armamentarium of pleoptics consists of instruments designed to (1) diagnose eccentric fixation, (2) temporarily blind the parafoveal area and (3) stimulate the fovea. In addition, there are devices which are intended to coordinate the eye, the cortex and the hands. The term *pleoptics* was coined in 1940 by Bangerter,[3] of St. Gallen, Switzerland, in reference to his series of exercises directed toward such coordination. In 1953 he developed a method for restoring foveal fixation; and his textbook, published in 1955, remains the basic authoritative source of information on the subject. Bangerter's "Sehschule" has become a renowned institution for visual training. At the school, use is made of numerous ingenious devices to exercise the macula in correlation with other senses such as tactile, spatial and acoustical.

Unfortunately, Bangerter's equipment is cumbersome and expensive. Primarily for this reason, the spreading interest in pleoptics has centered around the instruments of Cueppers.[6] He began his work in 1954 and his method of diagnosis and treatment, which is similar to that of Bangerter, makes use of three relatively small and inexpensive devices, the Visuscope, the Euthyscope, and the Coordinator.

The Visuscope is essentially a conventional ophthalmoscope with low illumination. A small "star" figure can be inserted in the path of light, which is projected onto the retina. A measuring grid may also be inserted to record, in millimeters, any separation between fovea and star-figure.

The Euthyscope is also a modified ophthalmoscope, but with a high level of illumination. It is designed to project a cone of light of 30° arc on the retina, but leaves a central zone of from 3 to 5 degrees unilluminated.

The Coordinator makes use of the phenomenon of "Haidinger's brushes." This is an entoptic phenomenon, concerned with the appearance of polarized light at the fovea. Because of the "grain" of the center of the macula, the "brushes" are only observed when foveal fixation is being employed and hence are a valuable factor in foveal retraining.

One of Bangerter's instruments, the "pleoptophor," combines in one instrument the functions of Cuepper's three. Another, the "letter-separator," is used for gradually reducing intervals between letters as a way to help improve foveal fixation. A third instrument, the "localizator," is used in training for better hand-eye coordination, the patient being required to place a small stylus in various small holes without touching the sides of the holes.

The results ascribed to pleoptic training appear quite impressive. For example, in a series of 50 cases reported by Mayweg and Massie,[10] improvement to 20/20 vision occurred in almost 80 per cent. Before treatment, vision ranged from 20/60 to less than 20/400, and in all except eight cases occlusion of the unaffected eye had been carried out without any measurable improvement in visual acuity.

Pharmacological Treatment

Both cycloplegic drugs (atropine, for example) and miotics (isoflurophate, pilocarpine) have been advocated for use in the treatment of esotropia, however paradoxical it may seem that drugs so opposite in action could both accomplish the same result, namely, reduction in the degree of deviation.

Guibor[8] proposed the use of cycloplegics. He cited Duke-Elder[7] with regard to the possible effect of atropine on the extra-ocular muscles, an aspect of its use that is rarely considered. He also stated, contrary to most other opinion on the subject, that atropine reduces hypertonicity of accommodation and therefore hypertonicity of associated accommodative convergence. It is generally felt that, although atropine does in fact reduce accommodation by paralyzing the ciliary muscles, it does not alter accommodative effort; in fact, it may even stimulate accommodative effort as the patient attempts to overcome the cycloplegic effect. Assuming that accommodative convergence is directly related to accommodative effort, rather than to the end result, the degree of esotropia might be expected to increase, rather than decrease. This it does, in many cases. The use of atropine is probably best reserved for cases in which occlusion is desired but cannot be maintained by mechanical means; particularly in high degrees of hyperopia, atropine affords quite effective physiological occlusion.

The value of parasympathomimetic drugs (miotics) in the treatment of esotropia was recognized by Javal[9] as early as 1896. Specifically, he advised the use of pilocarpine to improve the appearance of a young girl with esotropia who was attending a wedding. The more recent stimulus toward the use of miotics has been largely provided by Abraham.[1,2] In a preliminary paper published in 1949 he described the use of pilocarpine in a series of 44 cases of comitant esotropia, with beneficial results in about 80 per cent. He also suggested the use of miotics in unilateral high hyperopia, in order to equalize vision without producing aniseikonia. In a second paper, published in 1952, he reported on 88 additional cases treated in this manner. It was emphasized that treatment should be continued until the age of eight, at which time the fusion faculty had matured. Permanent cure may frequently be achieved after divergence amplitudes have sufficiently improved.

At present, the use of miotics forms an integral part of the nonsurgical treatment of accommodative esotropia, as practiced by Costenbader[5] and others. Whitwell and Preston[14] recommended this therapy for residual esotropia-for-near which may follow operation for correction of squint. Isoflurophate (Floropryl®) is now the drug of choice, rather than pilocarpine, because of the longer duration of effect. It is used in strengths of from 0.01 to 0.03 per cent, the basic 0.1 per cent solution having been diluted with peanut oil or sesame oil. It can be used daily, but in many cases a satisfactory result is obtained by administration on alternate days or even every third day. Side effects may consist of cramping pain or local irritation, which is usually transient. Only rarely is sensitivity encountered, either to Floropryl or the oil diluent. Cysts of the iris along the pupillary margin occur frequently in persons being treated with this drug; Costenbader[5] said the incidence was 50 per cent, but noted that they subside without ill effect when the drops are discontinued.

The most obvious explanation for the beneficial results of miotics lies in the fact that they produce peripheral accommodation without central accommodative effort and associated convergence. They thus reduce the degree of hyperopia and shorten the distance to the punctum proximum, which makes them particularly valuable in the treatment of the so-called "hypo-accommodative" esotropes. Another explanation, and one which has received no attention in the literature, has to do with pupillary contraction rather than ciliary spasm. If the drug reduces the size of the pupil to 1 mm., the effect is that of a camera with a focal length of about 25 mm. and an aperture setting of *f*25. Such a camera would give satisfactory resolution of objects at distances between infinity and about 20 inches from the lens. Thus, a large part of the benefit of miotics probably accrues not only from decreased hyperopia, but from a decreased need to employ accommodation to maintain a sharp image on the retina.

Little need be said about the use of either sympatholytic or sympathomimetic drugs in the treatment of esotropia. They do not have proven effect on the accommodative mechanism.

384 Post Street, San Francisco 8.

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Surgical Treatment of Convergent Strabismus

FLOYD M. BOND, M.D., San Diego

• In convergent strabismus, glasses, visual training and exercises are often helpful, but operation is usually needed in addition to produce a functional or cosmetic cure.

Babies who are born cross-eyed should be examined early and nonsurgical treatment started so that proper visual appreciation will be developed in both eyes.

Children in whom strabismus develops some time after birth (usually between 18 months and six years of age) should be examined with atropine, glasses prescribed when indicated and full medical treatment instituted. If those measures fail, operation should be done on one or both eyes, the operation depending on the magnitude of the deviation.

THE SURGICAL TREATMENT of convergent strabismus is not an exact science, and the evolution of surgical procedures is still in progress. The goal is a functional cure of binocularity, with depth perception and no incomitance. If this is unattainable, then the best possible cosmesis is sought, with as near normal visual acuity as possible.

Concomitant strabismus is a dissociation of the eyes wherein the deviation remains the same in all directions of gaze. Duke-Elder[3] divides it into two types:

1. Primary concomitant strabismus which is due to the effect of an obstacle in the sensory (afferent) paths of the binocular reflexes or in their central organization, so that the eyes, visually dissociated but coordinated by the postural reflexes, retain their motor taxis unimpaired. Therefore it is a bilateral affection. The nonfixing eye deviates. The essential feature of such a squint is a failure in binocular single vision and the squint occurs during the development of the binocular reflexes.

2. Secondary concomitant squint is owing to abnormality (usually paresis) of a peripheral muscle. Commonly a weakened muscle on one side is opposed by a contracted muscle, the situation eventually bringing about permanent structural changes. Hence the deviation, originally apparent only on movement in the direction of the action of the affected muscle, becomes evident in all directions of gaze, persists after the cure of the paresis, and the squint becomes comitant.

Concomitant strabismus is of three clinical types—monocular, intermittent and alternating. Approximately 82 per cent of all concomitant squints are monocular, and the remainder is about evenly divided between intermittent and alternating. When treatment is considered, they are classified also as accommodative, partially accommodative and nonaccommodative.

Functional cure can be attained in approximately 30 per cent of patients if they are treated early and correctly. Usually surgical intervention is not necessary for the accommodative type, as the refraction under atropine and properly prescribed glasses will usually be adequate. Operation is almost always required for alternating strabismus and for whatever part of partially accommodative strabismus glasses do not correct. In cases in which surgical treatment is necessary, it should be done early so that the binocular reflexes will have a chance to develop properly.

In strabismus of the monocular and intermittent types, atropine refraction should be done and corrective lenses prescribed before operation is considered. Amblyopia should be treated by occlusion and alternation and by training to give the patient full appreciation of diplopia. If the eyes can be brought to equal vision or nearly so, the prognosis is much improved. Fusion training is advisable if the patient is old enough. Operation should not be delayed if the angle of deviation is an obstacle to fusion.

For patients with congenital convergent strabismus and those in which the condition develops in the first year of life, operation should be done early but it should be conservative. The visual axes should be placed as near parallelism as possible to allow the visual acuity and binocular reflexes to develop normally if a cure is to be expected. In general, patients of this order should have operation between the twelfth and eighteenth months of age. The choice of procedure lies between bilateral symmetrical recessions of the medial rectus muscles and a recession of a medial rectus and a resection of a lateral rectus of the same eye. Since conservatism is advisable, a bilateral 4 mm. recession of the medial rectus muscles is a safe procedure. If the unilateral operation is decided upon, a 4 mm. recession of a medial rectus and a 7 or 8 mm. resection of a lateral rectus is conservative. It is well known that the younger

Presented as part of a Panel Discussion on Strabismus before the Section on Eye at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

the patient and the greater the angle of deviation, the more to expect from operation. Frequently patients of this kind will need further operation, and the parents should be so advised at the outset. Furthermore, the parents should be told that since the binocular reflexes develop gradually over a period of five or six years, the child must be under observation at regular intervals during this period.

If the onset of strabismus is between age one and age three, and if nonsurgical means have failed, operation should not be delayed. If strabismus occurs after age three, surgical treatment may be delayed for a considerable time, for the binocular reflexes have already been partially developed. Other means may be effective. Also, it is in the period from two and a half to four years of age that most accommodative squints appear, and glasses and other nonsurgical treatment may be given a good trial before resort to operation.

In deciding when to operate, and which of the horizontal muscles to operate upon, a large number of factors are to be considered, such as age of the patient, age at onset, duration of the squint, refraction, visual acuity, anisometropia, amblyopia, amount of deviation at distance and near, both with and without glasses, intermittency and variability of the angle of deviation. Additional factors include rotations, secondary deviations, adduction and abduction; vertical component, near-point of convergence and whether the angle of deviation is greater when the patient is fixing upon an object with one eye than it is when he is using the other.

The mechanical factors to be considered are the size and attachments of ocular muscles, contractures, anomalies of check ligaments, irregularities of the size of the globes and orbits, as well as visible lesions of the media, the fundus or the optic nerve.

In older children, the status of retinal correspondence, suppression, fixation habits and fusion are considerations.

The presence or absence of the accommodative element is important, and if accommodative abnormality is present it should be corrected.

The near-point of convergence is probably important only when it is remote. The medial rectus muscles invariably can adduct normally or excessively even when convergence is poor. It is important to note in this regard that the innervation to produce convergence is separate from the innervation of lateral version. The origin from the central nervous system is not the same. However, with a remote near-point of convergence, the primary procedure should be on the lateral rectus muscles.

In most convergent strabismus there is an excessive amount of adduction and the medial rectus of one eye or both should be recessed and (depending on the angle of deviation and the state of abduction) a lateral rectus resected.

The angle of deviation should be measured with each eye fixing, and the difference noted. Then the operative aim should be to correct the lesser angle. Also the difference of the angle of deviation at distance and near should be noted and the deviation at distance corrected. Should the larger angle for near be corrected, exophoria or exotropia for distance might result.

Many patients with convergent strabismus have abnormality of vertical alignment. If it is relatively slight, it may disappear following the correction of the esotropia or be so small that it can be satisfactorily controlled with prisms incorporated in the glasses. If it is of considerable degree it may require attention at the same time the esotropia is corrected. No absolute rules can be given, but if the vertical deviation is greater than the horizontal, it probably should be corrected first. Not infrequently an overacting inferior oblique muscle will be much improved after the horizontal deviation is corrected and need no treatment at all.

The Medial Rectus

A recession of a medial rectus is generally recognized as a good procedure. The effect may be varied by the amount of the recession. The usual recession is 4 or 5 mm. Operation for recession of less than 3 mm. is rather pointless, as the surgical error can be as much as 1 to 2 mm. Recession should not be carried beyond the equatorial plane, owing to danger of loss of effectiveness of the muscle mechanically. Central tenotomy and recessions of 1.5 to 2 mm. are practically valueless except insofar as they enhance the action of a direct opponent which has been tucked or resected. Marginal myotomy is unpredictable and while some surgeons use it as a primary procedure, it may be left for a final procedure if bilateral recessions and resections have not fully corrected the esotropia.

The technique of recession varies with surgeons but the tendon should be dissected free from Tenon's capsule and from the superficial conjunctiva, and the check ligaments should be freed. If the superficial conjunctiva is not freed under the caruncle it may cause a retraction of the caruncle as healing occurs. The tendon is cut free from the insertion with scissors close to the sclera. Two fixation forceps with locks are placed at each end of the original insertion for fixation and stabilization of the globe, while the superficial scleral sutures of fine catgut are placed at the desired distance back of the original insertion. If a clamp is used on the muscle, the sutures should be placed in mattress fashion in the very end of the muscle tendon distal

to the clamp to preserve as much tendon as possible.

The recession of a medial rectus alone is unpredictable. Keith Lyle[6] states that a 5 mm. recession on the average reduces the angle of deviation from 7 to 12 degrees. In my own experience, the recession of a single medial rectus muscle varies greatly and is used only in patients with a convergence excess and a relatively small deviation.

The Lateral Rectus

In convergent strabismus the lateral rectus may be resected, cinched or tucked. In resection, usually from 5 to 10 mm. of the tendon is excised; in tucking, the amount involved is usually from 5 to 12 mm. In general, either method is applicable. In tucking, the tendon must be thoroughly cleaned of Tenon's capsule and of the sheath so that when the tendon is folded upon itself the flat surfaces will grow together. The tendon is not cut and the amount involved in the operation can be varied as easily as the amount excised in a resection. There is practically no danger of the sutures' slipping out, and the eye may be treated orthoptically as early as desired. In the author's experience, the results of a tucking procedure are more predictable than those of resection. An advancement may be done at the time of the resection, but this is rarely indicated or needed.

Since recessions are more effective immediately and are also more lasting than resections and tucks, and since adduction is usually much greater than abduction in a normal patient, it is rational to include a recession in most patients with a convergent deviation; and frequently a resection must also be made on the lateral rectus at the same time, in order to gain the necessary amount or correction. When the two operations are combined, there is a greater effect and it is immediate. Some authorities advise bilateral symmetrical operation, claiming it produces less incomitance and offers a much better chance for cure. Bilateral recessions, if too generous, can lead in time to overcorrection. It seems to work well if the deviation is not too large (about 30 to 40 diopters) and if the recessions are in the neighborhood of 4 mm. In the case of alternating strabismus of moderate degree, bilateral operation may be the procedure of choice but a recession and resection on one eye is also effective. Bimedial recessions may also be used satisfactorily for patients who at first had monocular strabismus but have been taught alternation and have equal or near-equal visual acuity. Cushman[2] and Costenbader[1] said that in certain cases where there was thought to be partial paresis of the external rectus muscle, the evidence of paresis disappeared in time as the normal binocular reflexes developed. They expressed belief that gradual constant improvement may be expected up to six months after operation, and that then if there is still residual deviation, one or both of the lateral rectus muscles can be shortened.

Schlossman[4] and Sugar,[5] among others, expressed the opinion that a bimedial recession should not be done and they stated a preference for recession and resection. It was their belief that by recession and resection on one eye, valuable information can be gained as to how much to do on the fellow eye in the event residual deviation remains.

The choice between methods would seem to be of no great moment so long as the procedure is rational in the individual case. Care must be taken not to do too much to any one muscle; none of them ought to be altered so much that its normal physiological action is impaired. Versions and ductions must be satisfactory after operation. In general, a 5 mm. recession of a medial rectus and an 8 to 10 mm. resection (or 10 to 12 mm. tuck) of a lateral rectus is adequate and reasonable as a maximum when functional cure is the goal. In certain cases of monocular squint where a cosmetic result is desired, a bolder procedure on the deviating eye may be justified, as parallelism of the eyes in primary position is the real goal.

It is most difficult to be specific as to the amount of recession and resection in any patient, for there are so many variables. The same degree of muscle displacement, in millimeters, may not correct the same amount of deviation in two patients with seemingly identical squints.

Various observers have set up tables as guides. They are valuable for the beginner, but experience is the best teacher and even the most experienced surgeon is frequently puzzled by the end result. Certainly a strongly overacting medial rectus needs recession and a weak lateral rectus needs tucking. A plan should be decided upon before operation, and rarely should it be changed at the operating table. Usually a clue to the best operative plan can be obtained from study of rotations. Occasionally, a little alteration of the predetermined plan may be made on the basis of information obtained by observation of forced ductions at the operating table.

My plan is about as follows: In a case of alternating convergent strabismus in which the angle of deviation is 15 diopters, a recession of the medial rectus of 5 mm. or a tuck of a lateral rectus of 10 to 12 mm. is made. In angles of 20 to 30 diopters, with or without accommodative element, a recession of 3 mm. and a tuck of 6 to 8 mm. is usually sufficient. In angles of 30 to 40 diopters, a recession of 4 mm. and a tuck of 8 to 10 mm. is made, or a symmetrical bimedial recession of 3 to 4 mm. In cases of 40 to 50 diopters of deviation, a 5 mm.

recession and an 8 to 10 mm. tuck or symmetrical bimedial recessions of 4 mm. are generally adequate. If the deviation is 50 diopters or more, a 5 mm. recession and an 11 to 12 mm. tuck is made. Any residual deviation can be corrected later by operation on the other eye.

In the treatment of monocular esotropia of 15 to 20 diopters with a good near-point of convergence, with equal or near-equal visual acuity and with an angle of deviation greater for near than for distance, I operate on the deviating eye and recede the medial rectus 5 mm. or tuck the lateral rectus 8 to 12 mm. If the angle is 20 to 30 diopters, I recede the internus 3 mm. and tuck the externus 5 to 6 mm.; from 30 to 40 diopters, recede the internus 4 mm. and tuck the lateral rectus 6 to 8 mm.; from 40 to 50 diopters, recede the medial rectus 4 mm. and tuck the externus 10 to 12 mm.; 50 diopters or more, recede the medial rectus 5 mm. and tuck the lateral rectus 12 mm. Any residual esotropia can be corrected later by treatment of the dominant eye.

In the treatment of monocular esotropia with amblyopia (20/30 to 20/70) with good fixation of the deviating eye and with decided excess of adduction, if the angle is from 20 to 30 diopters, I recede the medial rectus 3 to 4 mm. and tuck the lateral rectus 5 to 7 mm.; from 30 to 40 diopters, recede the medial rectus 4 mm. and tuck the lateral rectus 6 to 8 mm.; from 40 to 50 diopters, recede the medial rectus 4 mm. and tuck the lateral rectus 8 to 10 mm.; 50 diopters or more, recede the medial rectus 5 mm. and tuck the lateral rectus 10 to 12 mm.

In the treatment of monocular esotropia with pronounced amblyopia and no hope of fusion, I operate on the deviating eye in an attempt to slightly undercorrect. Then in time the squint tends to exodeviation. If the angle of deviation is great, the maximum recession I use is 6 mm. and the maximum tuck is 12 mm.

It is necessary to treat all vertical components that are a barrier to fusion. If the superior oblique muscle is paretic, it may be tucked or the opposing inferior oblique may be receded. Occasionally the inferior rectus (yoke muscle) of the opposite eye may also be receded. If there is overaction of the inferior oblique, I usually recess the muscle up to 8 mm. If there is pronounced overaction of the inferior oblique (over 14 diopters), myectomy is indicated. If a paretic superior or inferior rectus muscle is the cause of the vertical deviation, an O'Connor cinch is my choice.

Bank of America Building, San Diego 1.

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Electromyography in Strabismus

EDWARD TAMLER, *M.D.*, ARTHUR JAMPOLSKY, *M.D.*, and ELWIN MARG, *Ph.D.*, San Francisco

• **Electromyography of the human extraocular muscles is a new research tool designed to elucidate many problems in ocular physiology. Although at present it affords little clinical help in the diagnosis and treatment of strabismus, it may in time be of value in neuro-ophthalmologic disease.**

ELECTROMYOGRAPHY of human extraocular muscles is proving to be a technique of great value in elucidating the nature of normal ocular motility.[2,3,6,7,8] However, in the field of strabismus, whether paralytic or nonparalytic, it offers very little practical help in diagnosis and treatment at the present time.

Briefly the procedure[5] (schematically represented in Figure 1) is as follows: The patient is placed on a wheeled stretcher in a room that is screened to keep out extraneous electrical impulses that might contaminate the electromyogram. Using topical anesthesia only, fine electrodes are inserted through the conjunctiva into the extraocular muscles to be tested. The electrical activity of the muscle is carried via a headband and cables to an amplifying system which, in turn, sends the amplified impulses to an oscilloscope. The display on the face of the oscilloscope is photographed by a variable film speed camera.

Electrical activity of the muscle is also carried to a loudspeaker for auditory monitoring. This guides the investigator in determining whether he has a satisfactory insertion in the muscle. When the insertion is adequate, a loud rumbling or crackling noise, rising to a crescendo, will be heard as the eye moves into the field of action of the involved muscle.

The investigator wears a lapel microphone, into which he dictates the conditions noted as the test is being performed. This dictated protocol of the test is recorded on tape. Later, when the results of the test are analyzed, the film record and the narrative are synchronized so that the reviewer can consider the electromyogram and the investigators' comments together. Figure 2, a typical electromyogram obtained by this technique, shows a simultaneous recording of the electrical activity of four extraocular muscles.

Investigations into the applications of electromyography to comitant (nonparalytic) strabismus are hindered by the dearth of suitable subjects. Most of the available subjects with comitant strabismus are children, who cannot be considered suitable for a technique requiring insertion of needles into the eye muscles under topical anesthesia. Deeper anesthesia is not feasible, for it would alter the conditions of the test and vitiate the findings. In the occasional case in which an adult subject with comitant strabismus became available for testing, no significant difference in extraocular muscle electrical activity as compared with that of normal subjects was noted. This was to be expected inasmuch as extraocular electromyography reflects primarily the peripheral extraocular muscle activity rather than central mechanisms, which is a further obstacle to the clinical use of electromyography in comitant strabismus.

There are also obstacles to the application of electromyography to noncomitant strabismus. As with comitant strabismus, one is the fact that electromyography informs primarily of the peripheral activity of the neuromuscular extraocular system. This limits conclusions that may be drawn from electromyograms regarding more central mechanisms or etiologic factors. For example, Breinin[1] attempted to explain the "A-V" syndrome* on the basis of changes in activity of the horizontal recti during vertical movements. He observed that in most of the ten cases of the A-V syndrome in which he carried out the tests the horizontal recti showed innervational changes corresponding to the deviation, although in a few of this group the horizontal recti showed no particular change in vertical gaze. From this, he concluded that the horizontal recti must play some part in the varying angle of strabismus and that in surgical treatment it is advisable to deal first with the horizontal muscles, then the vertical. Such a conclusion may be misleading, for the mere fact of increased activity of a muscle may be owing only to the new position of the eye and give no information as to why the eye moved to this new position. For example, in exophoria if the divergent eye is covered it will deviate outward and the electromyogram will show increased activity of the lateral rectus of that eye (Figure 2), but it cannot be concluded from this

From the Division of Ophthalmology, Department of Surgery, Stanford University School of Medicine, San Francisco. This study was aided by funds provided under Public Health Service Grant B686 and Office of Naval Research Contract, NONR 225 (20).

Presented as part of a Panel Discussion on Strabismus before the Section on Eye at the 88th Annual Session of the California Medical Association, San Francisco, February 22 to 25, 1959.

*The term takes its name from the shape of the letters A and V: There is horizontal incomitance in vertical movements of the eye, vertical incomitance in cardinal direction movements.

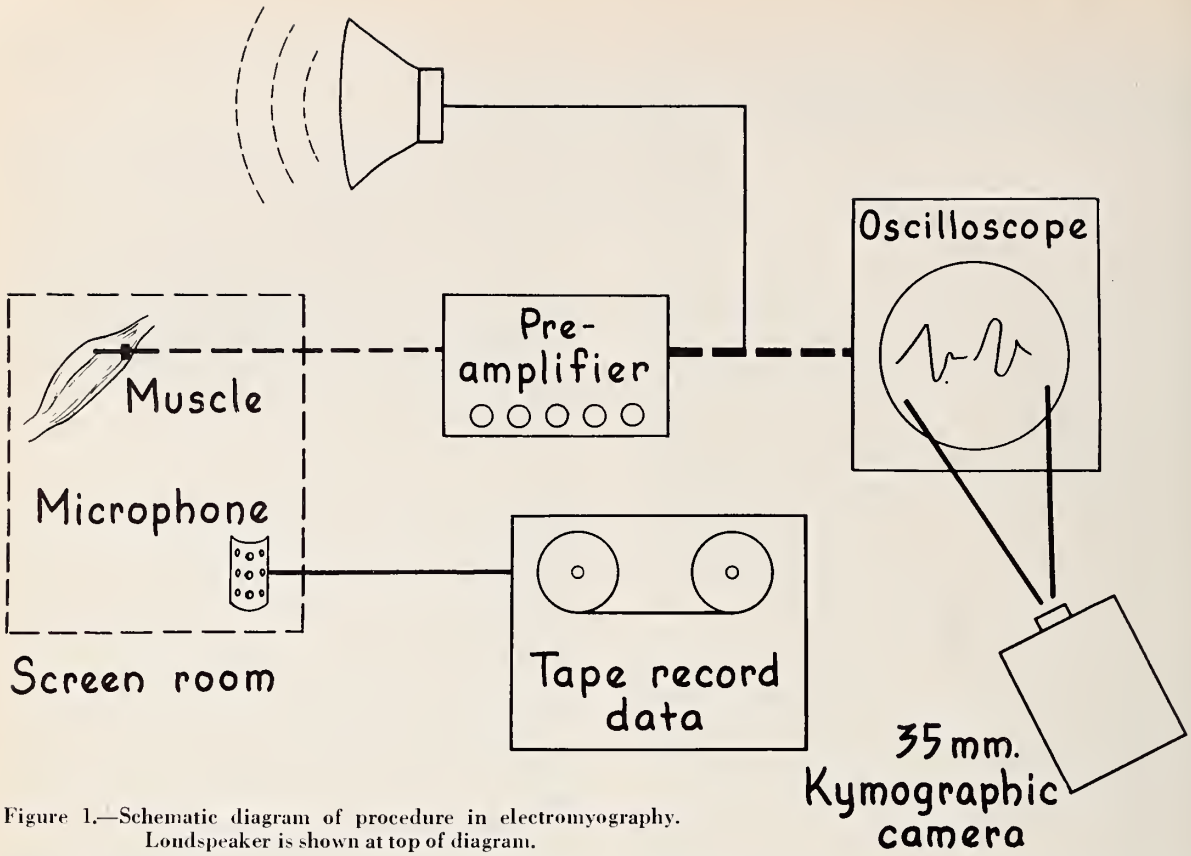


Figure 1.—Schematic diagram of procedure in electromyography. Loudspeaker is shown at top of diagram.

that an abnormally overactive lateral rectus caused exophoria. Similarly, in the A-V syndrome the electrical activity of the horizontal muscles in vertical movements may merely reflect the changing horizontal alignment of the eyes rather than indicate the cause of the horizontal incomitance. Furthermore, horizontal recti activity during vertical movements may vary greatly between one normal subject and another. In Figure 3 the right lateral rectus shows greater activity in the up and right position of gaze than in the down and right position. In another subject the right lateral rectus was more active in down and right gaze than in the up and right gaze (Figure 4).

Another obstacle to the application of electromyography to paralytic strabismus is the relatively small number of patients with a neuro-ophthalmologic defect of specific type. Although reports have been made of abnormal electromyograms in conditions such as diabetic neuropathy, aberrant regeneration, Duane's syndrome, endocrine exophthalmus, ophthalmoplegia, Moebius' disease, and superior oblique tendon sheath syndrome, it cannot properly be inferred from these few cases that the patterns observed are characteristic. At present an abnormal electromyogram in neuro-ophthalmological disease merely confirms the presence of neuropathy or myopathy.

With regard to the diagnosis of extraocular muscle palsy, it should be pointed out that the relative strength of a muscle cannot be judged by the amplitude of the electromyographic tracing except in pro-

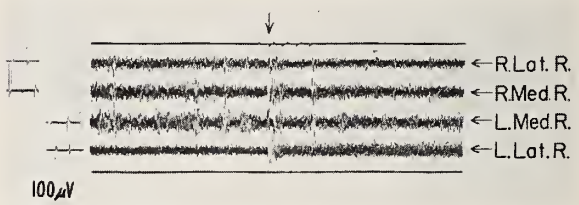


Figure 2.—Simultaneous recording of four extraocular muscles. Calibration is at left (the deflection represents 100 microvolts), signal marker is on top line, and time scale is at the bottom, in this and succeeding figures. Arrow indicates moment of covering the left eye of a subject who had exodeviation. Note the increased activity of the left lateral rectus muscle as the left eye moves outward, while the right eye maintains steady fixation.

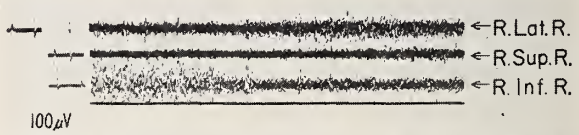


Figure 3.—Electromyogram made as the right eye was moving from down and right gaze to up and right gaze. Note increased electrical activity of right lateral rectus (right half of tracing) as eye moved into upper field of gaze.

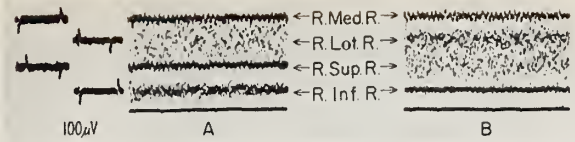


Figure 4.—*A*, Tracings made with the right eye in down and right gaze. *B*, The same eye, a moment later, in up and right gaze. Note increased right lateral rectus activity in the lower field of gaze (widely spread tracing of right lateral rectus lead in *A* as compared with somewhat more concentrated markings in corresponding tracing in *B*).

nounced paralysis. Even in normal conditions the amplitude may vary, depending on several factors, principally the location and depth of the inserted electrode. Figure 5 shows tracings from three electrodes that were inserted into the same normal eye muscle during contraction of that muscle; there were considerable disparities. Electrodes closer to the belly of the muscle record activity sooner and reach larger amplitudes than the recordings from electrode tips more distant from the muscle belly.

Despite the obstacles, there are a few clinical applications of electromyography to paralytic strabismus. For example, there is enough evidence now to state that distinction can be made between limitation of eye movement due to mechanical restriction and that due to nerve damage. Figure 6 is an electromyogram of the left superior rectus muscle of a 17-year-old boy who received trauma to the left orbit that resulted in inability to move the left eye up and out. As the tracing indicated no abnormality, innervation and muscle contraction were considered normal, which suggested the impaired motility was owing to mechanical restriction. Operation was performed and scar tissue adhesions involving the muscle were excised. Rotation to the up and out position was possible thereafter. An electromyogram after operation was the same as the one made before operation.

Another application is in the diagnosis of myasthenia gravis. It appears that ocular electromyography is the most sensitive test for the response of the muscles to a test dose of edrophonium chloride (Tensilon®). Figure 7 shows the increase in electrical activity in an involved muscle in a patient with myasthenia gravis about 20 seconds after the intravenous injection of 10 mg. of edrophonium chloride. Electromyography may decide the diagnosis in patients who have false negative response to the other usual clinical tests.

Ocular electromyography also gives objective confirmation of the over-action of a yoke muscle in a paralytic strabismus. This is illustrated in an electromyogram in a case in which the paralysis was artificially induced by injection of procaine (Figure 8).

Eye Research, Stanford University Hospitals, San Francisco 15 (Tamler).



Figure 5.—Tracings from three electrodes in the same eye muscle as the muscle contracted. Note the variability in amplitude and speed of response from electrode to electrode. Channel 2 was not recording.



Figure 6.—Tracing made as the left eye was moving from primary position to up and right gaze and then attempted to move to up and left gaze. Response in the left superior rectus muscle was normal in spite of the fact that the left eye failed to move up and out.



Figure 7.—Increase in activity of involved left lateral rectus muscle (as shown by increase in amplitude of waves, beginning about midway of tracing) in patient with myasthenia gravis approximately 20 seconds after intravenous injection of 10 mg. of edrophonium chloride.



Figure 8.—*A*, When these tracings were made, the right eye was performing saccades (rapid versions) to right and left. *B*, The same eye was performing the same movements after procaine-induced paralysis of the left medial rectus. Note greater activity of right lateral rectus (yoke muscle of paralyzed muscle) in saccades to the right in *B* as compared with *A*.

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CASE REPORTS

Cardiac Arrest Through Volition

C. M. McCLURE, M.D., Lindsay

SINCE DISCOVERY of the heartbeat, yogis and fakirs have claimed to be able to control it at will, but there are no documented cases in the medical literature of cardiac arrest through volition, without physical manipulations of any kind. The following case is presented because it is unusual, perhaps unique.

REPORT OF A CASE

A 44-year-old aircraft mechanic of Danish descent was admitted to Lindsay Municipal Hospital, April 24, 1958, because of a cold with cough of two weeks' duration. He said that in the previous 20 years he had had six episodes of upper respiratory tract infection, and that during these periods he had found that by sitting quietly, relaxing completely and "allowing everything to stop," he could induce progressive slowing of the pulse until cessation of heart action would occur, then a feeling of impending loss of consciousness. After a few seconds of this sensation, he would take a deep breath and normal heart action would resume. These occurrences resulted in the patient's developing a fear of sleeping, lest his heart stop and not start again. In 1953 and several times afterward the author verified this story by auscultating the heart and palpating the radial pulse while the patient induced several seconds of cardiac arrest. At these times his color would become the ashen grey of sudden circulatory failure, and partial loss of consciousness would ensue. However, no cardiac irregularities were ever observed during either normal sleep or general anesthesia. Cardiac arrest occurred only when the patient deliberately induced it.

The patient stated that at the age of seven years he had had rheumatic fever, then was bedfast for a long time and took digitalis for five years thereafter. Since that time he had had a cardiac murmur but no arthralgia, dyspnea, orthopnea, fever or chills. He underwent tonsillectomy at age 12 and cholecystectomy in January 1958, both under general anesthesia, without incident.

Submitted October 30, 1958.

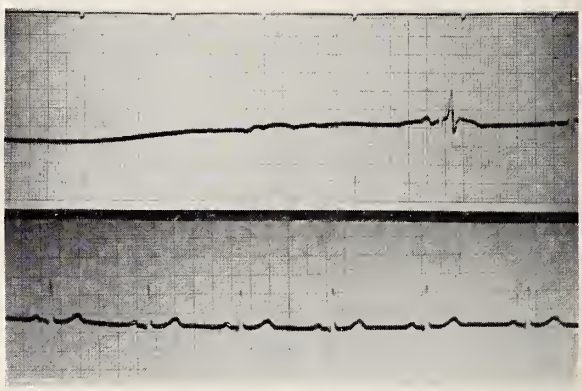


Figure 1.—*Above:* Electrocardiogram (lead I) showing cardiac arrest through volition. *Lower:* Normal tracing (lead I) for same patient.

On physical examination, the oral temperature was 99°, the pulse rate 60, respirations 18 per minute and blood pressure 134/74 mm. of mercury. The patient was muscular, intelligent, somewhat tense and anxious. There was no icterus, cyanosis or edema, but there was clubbing of all fingers. The only other abnormality noted in a complete examination was a grade I systolic murmur heard over the aortic area, becoming grade II along the left sternal border, the sound transmitting poorly to the apex. The rhythm was regular. Upon x-ray examination it was observed that the size and contour of the heart were within normal limits.

Electrocardiographic leads were connected and the patient was asked to induce slowing of the heart. This actually occurred with no physical manipulations except lying very quietly and allowing respiration to become quite shallow. The electrocardiogram showed slowing of the sinus rate progressively to the point of sinus arrest for a period of five seconds, followed by several atrioventricular nodal beats, and then resumption of sinus bradycardia at a rate of about 55. At several points in the record, occasional atrioventricular nodal beats were observed. An electrocardiogram an hour later with the patient at rest was normal.

A consultant who examined the patient and read the electrocardiograms suggested the use of sympathomimetic drugs, but subsequent use of atropine, ephedrine, amphetamine and aminophylline at different times did not change the arrest mecha-

nism. Even after recovery from the respiratory tract infection, the patient found that he could still induce bradycardia and brief periods of cardiac arrest almost at will.

DISCUSSION

It was felt that the clubbing of the fingers noted in this patient was familial, since it was present also in his son, who was healthy. The underlying cardiac change is believed to be well compensated rheumatic heart disease with aortic valvulitis. The bradycardia and cardiac arrest are probably manifestations of exaggerated vagotonia, induced through some mechanism which, although under voluntary control, is not known to the patient himself. Careful observation did not reveal any breath-holding or Valsalva maneuver in connection with the cessation of heartbeat. Apparently the patient simply abolished all sympathetic tone by complete mental and physical relaxation.

SUMMARY

A case is presented of a patient with old rheumatic heart disease, who is able to produce cessation of heartbeat, apparently by volition alone.

287 East Hermosa Street, Lindsay.

Acute Renal Failure Manifesting as Water- And Salt-Losing Insufficiency

AARON J. FINK, M.D., Mountain View

CLINICAL SYNDROMES involving primary inability by the renal tubules to retain sodium have reached their fullest expression under the generic term "salt-losing nephritis." The condition usually is chronic, requiring long-term salt replacement therapy. Except for the reversible urinary salt loss of the diuretic phase of lower nephron nephrosis and that caused by diuretic agents, relatively little has been written of transient primary renal salt-losing syndromes. Following is a report of a case of reversible acute salt-losing renal insufficiency occurring after nephrectomy.

REPORT OF A CASE

A 75-year-old white woman was admitted to the Highland-Alameda County Hospital on January 22, 1958, following a fall at home, after which she apparently lay on the floor all night, without voiding or eating, until found by a friend the next morning. She said that she had had no previous weakness, dizziness or imbalance and she was proud of being active. The last time she had needed the services of a physician was some forty years before for the birth of a child.

Upon examination it was noted that she was alert and spry-appearing. There was a small laceration on her forehead. The blood pressure was 104/60 mm. of mercury and the pulse rate 76 with a regular rhythm. The bladder was palpably enlarged above the pubis, and on catheterization 200 cc. of grossly bloody urine was removed.

There was motor weakness of the upper and lower extremities and assistance in walking was required. No neurological abnormalities were noted. X-ray films of the skull and chest taken at the time of admission were normal. The patient was then referred to the urological department where cystoscopy revealed the presence of what appeared to be diffuse, severe, acute hemorrhagic cystitis.

Submitted September 5, 1958.

In light of the patient's debility, an indwelling catheter was placed and laboratory examinations were obtained the next day. Results of centrifuged urine examination showed alkaline reaction, 2 plus albumin, no sugar, 140 leukocytes and 350 plus erythrocytes per high power field. Hemoglobin was 13 gm. per 100 cc. of blood, and leukocytes numbered 15,800 per cu. mm. Blood urea nitrogen was 100 mg. per 100 cc. and blood creatinine was 1.7 mg. per 100 cc. A urine culture grew an antibiotic resistant Aerobacter aerogenes. Phenolsulfonphthalein excretion was 5 per cent in the first hour and 35 per cent in the second hour.

The clinical impression was that the patient had acute and chronic hemorrhagic cystitis superimposed on probable carcinoma of the bladder with bilateral hydroureter. However, less than a month later, following rehydration, the blood urea nitrogen was down to 11 mg. per 100 cc. The hemoglobin content eventually became stable at 8.8 gm. per 100 cc.

An electrocardiogram and an x-ray film of the chest were interpreted as being within normal limits. Intravenous pyelograms obtained at this time revealed the presence of mild bilateral pyelectasis and caliectasis with a strong suspicion of a filling defect in the right renal pelvis. A cystoretrograde study carried out February 25, 1958, showed considerable resolution of the previously noted inflammatory process in the bladder, and there was no evidence of carcinoma. In differential phenolsulfonphthalein studies of the kidneys, there was excretion of 1 per cent of the dye from the right side and of 10 per cent from the left in 12 minutes. Bilateral pyelograms showed a ragged, irregular filling defect involving the right renal pelvis and associated caliectasia. Inflammatory changes involving the left upper ureter were also noted. Microscopic examination on culture of specimens of urine collected in a 24-hour period were negative for acid-fast organisms. A retrograde study a few days later again showed the irregularity of the right renal pelvis, consistent with the impression of right renal pelvis

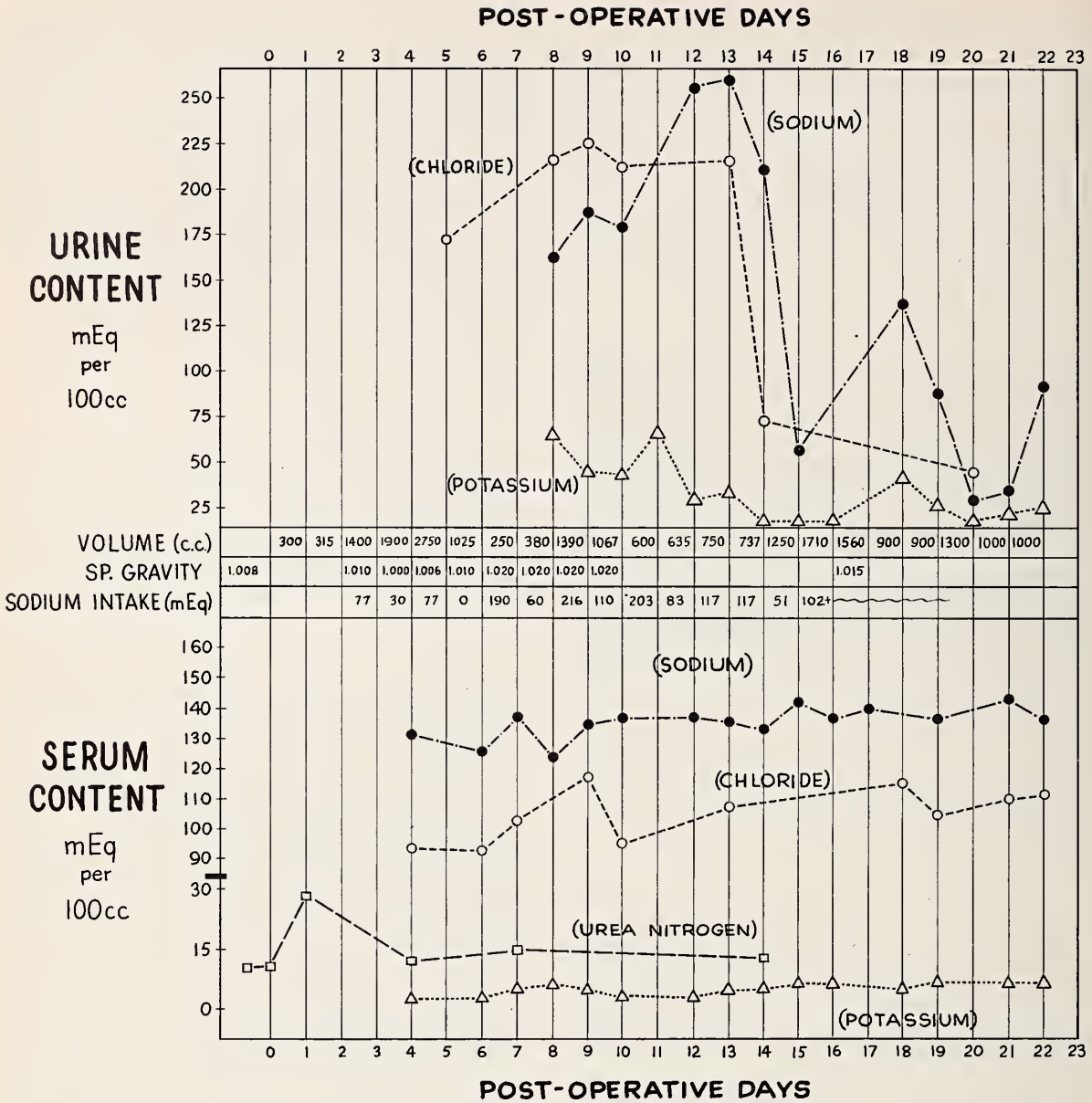


Chart 1.—Electrolyte contents of urine and serum, determined daily.

carcinoma. Another phenolsulfonphthalein determination on March 7, 1958, showed 47 per cent excretion in one hour and 15 per cent in the second hour. At her request the patient was discharged from the hospital, to return April 18. At the time of readmittance the blood urea nitrogen was 10 mg. per 100 cc. and the hemoglobin content 10.4 gm. per 100 cc. The specific gravity of the urine was 1.008 and the reaction alkaline.

On April 24, right transperitoneal morcellation nephrectomy was done with the patient under pentothal and nitrous oxide general anesthesia. The procedure was long and arduous owing to severe peripelvic inflammatory adherence to the vena cava and duodenum. The latter structure, which was intimately associated with both walls of the renal pelvis, had caused the pyelographic deformity. Separate closure was required for it.

Fluid replacement consisted of 2500 cc. of whole blood (1000 cc. of it given rapidly during a short period of acute hypotension) and 500 cc. of dextran. In the recovery room immediately after operation, it was noted that the blood pressure, which had been 110/60 mm. of mercury before operation, had risen to 130/110. In addition, there was peripheral cyanosis and a sustained clonus involving the right upper and lower extremities. It was thought that the acute surgical hypotension might have led to a cerebrovascular accident or that the amount of blood given had been excessive, causing an acute hy-

pertensive encephalopathic change. An immediate packed cell volume determination showed it to be 45 per cent, and it remained at that concentration for several days, implying that the distressing condition of the patient immediately after operaton was owing at least in part to hypervolemia.

The excised specimen, the pathologist reported, showed severe active and chronic ascending pyelonephritis and peripelvic inflammation.

The day after operation the blood pressure was within normal range and the patient was feeling well. During the night, oxygen inhalation therapy had been carried out and 2.0 gm. of albumin had been infused intravenously. Within 72 hours the patient was walking and taking fluids orally. The urinary volume rose from 315 cc. the first postoperative day to 2,790 cc. on the fourth day although the maximum daily fluid intake was only 1,500 to 2,000 cc. Specific gravity of the urine at this time ranged from 1.000 to 1.010. In the evening of the fourth postoperative day, the patient became restless and confused. It appeared that these phenomena might be ascribed to water intoxication. Since sodium determinations showed a moderately low content (Chart 1) hypertonic saline solution was given parenterally and the intake of fluids by mouth was restricted. Urinary electrolyte determinations were carried out daily and it became immediately apparent that the kidney was unable to retain salt. As the chart shows, serum sodium determination showed a moderately low content on the fourth postoperative day. During the next nine days the patient required increased amounts of sodium, up to 216 mg. per day in the form of hypertonic saline solution and molar lactate plus adequate potassium supplementation. The blood serum sodium levels, however, remained slightly low to normal, whereas the sodium content of the urine ranged upward from 157 mEq. per liter. Partial restriction of salt intake for one day resulted in a lowering of serum sodium, in edema formation and an increase in body weight. The blood urea nitrogen remained within normal limits, and serum creatinine on May 3 was 0.7 mg. per 100 cc. Carbon dioxide combining power was 26 mEq. per liter. An adrenocorticosteroid test in which 10 mg. of cortisone acetate was given intramuscularly during a 24-hour period of sodium chloride infusion at a constant rate, showed no response. An antidiuretic hormone vasopressin test on May 7 was inconclusive because of scant urinary output. On May 9, the 15th postoperative day, there was an abrupt decrease in urinary excretion of sodium, chloride and potassium, and thereafter the excretion of these chemicals remained within normal limits (except for one day when an increase was caused iatrogenically). An adrenocorticosteroid test was carried out again on May 14, and again gave no evidence that corticosteroid insufficiency was a factor in the salt-losing phenomenon in this case.

On May 19, 1958, the patient was discharged from the hospital. Subsequently observed twice, she was feeling well and had gained seven pounds in body weight.

DISCUSSION

This case would appear to illustrate vividly the functional dichotomy that can exist between the various portions of the nephron. Most certainly it helps in the recognition of different selective forms of acute renal insufficiency in response to a gross insult to the entire organ. Well appreciated are the chronic renal-losing syndromes wherein given solutes are not reabsorbed and are lost individually and even collectively as sodium, chloride, potassium, amino acids, glucose, etc.[2,4,5,8] In this situation, specific tubular lesions have either altered the carbonic anhydrase system as a result of underlying pyelonephritis or there are lesions as yet indeterminate. Less frequently seen are segmental nephron disturbances, clinically and chemically discernible, occurring during the course of acute renal failure. Usually the two main categories of acute renal failure—renal ischemia and direct nephrotoxic renal tubular cell poisoning—have produced these effects on the nephron so rapidly and completely that sequential analysis of their effects is impossible. This results in what is seen in the classical case of acute renal failure—oliguria, isothenuria and retention of sodium, chloride, potassium and nitrogenous wastes. These lesions may give rise to transient, barely perceptible clinical conditions, or they may cause a complete irreversible renal cortical necrosis incompatible with life, the degree depending upon the severity of tubular necrosis.

The etiological consideration in this case would appear to be one of ischemia secondary to decreased supply of blood to the kidneys. Acute transient surgical hypotension is a well known cause of acute renal failure, particularly if prolonged and if renal disease already is present. It would appear from the laboratory findings that impaired renal function existed in this case. Of additional and possibly primary importance was hypervolemia caused by infusion of too much blood. One can only conjecture that renal erythemia may have brought about stasis and thrombosis of the arterioles supplying the tubular portion of the nephron. Even more speculative is what collective effect the hypotension, hypervolemic hypertension and related hypoxia may have had on the cerebrum.

The polyuria which occurred during the first four postoperative days would at first seem to be related to the apparent operative over-hydration. However, Perlmutter[10] emphasized the occasional case of acute renal failure with oliguria for a period or not present at all, then almost immediate entry into the diuretic phase. It is during this phase of polyuria that concommitant large amounts of sodium can be lost in the urine. In the present case, however, after only four days of polyuria there was a decided decrease in urinary output to between 300 and 1,000 cc. a day. That this period of increased water output was related to an initial phase of unresponsive renal tubules could be seen in the inability to concentrate the glomerular filtrate until the sixth postoperative day. Other investigators also have noted

occasional cases of acute renal failure in which deviation from specific gravity of 1.010 has occurred.[6,10,12]

Urinary excretion of salt in the present case continued despite curtailment of intake of both salt and fluid and the diagnostic use of adrenocorticosteroids. The abrupt cessation of salt loss after two weeks was undoubtedly related to the functional restoration and regeneration of the involved tubular cells. Unfortunately, since laboratory determinations for titratable acid and ammonia were not available, further elucidation of this mechanism was prevented. The urine reaction, however, was acid on the three occasions this factor was determined. This observation, coupled with one determination of a normal carbon dioxide combining power, would make it seem that the carbonic anhydrase and ammonia production buffer mechanisms were operative.

Without the therapist's knowledge of the coincidental cessation of hypernaturia, an oral supplementary program of 6 gm. of salt a day was instituted. That the tubular salt resorbtion function had by then been restored became acutely apparent when serum sodium determination 72 hours later showed a content of 163 mg. per 100 cc. The onset of edema was noted at that time. Indirect evidence that the anatomic integrity of the tubular cells and basement membrane were maintained can be seen in the blood urea nitrogen content: After the rise to 29 mg. per 100 cc. on the first postoperative day, it did not exceed 15 mg. per 100 ml. at any of many times determined.

The initial diagnostic complexity of what appeared to be a pure form of salt-losing nephritis made adrenal cortical and posterior pituitary hormonal studies mandatory. From the first reported cases by Thorn, Koepf and Clinton[13] in 1944 stemmed general recognition of the syndrome that they called "salt-losing nephritis." It was characterized by the systemic symptoms of a chronic urinary salt loss—loss of weight, asthenia and hypotension progressing to edema hypertension, nitrogen retention and cardiac failure. In pathological examination of the kidneys in a number of subsequent cases, no specific tubular changes were noted, but in almost all the changes of chronic pyelonephritis were observed.[3,7] It was found that the symptoms and the rate of progression of the intrinsic renal disease could be greatly decreased by giving supplementary sodium chloride and sodium bicarbonate. Of critical importance was the observation that despite the decided clinical resemblance to a deficiency of adrenal cortical hormone, the condition was refractory to these substances and was related to a primary renal tubular disorder. Hence the desoxycorticosterone acetate test for differentiation.

In the present case it was difficult to rule out a type of acute transient cerebral salt-wasting syndrome that is known to be associated with severe hypertension occurring with cerebral neoplasms, infections, severe encephalomalacia and trauma.[1,11,14] However, rarely in that condition is the condition abruptly self-limited as it was in the present case.

SUMMARY

A case of an acute postoperative reversible water-losing and then salt-losing renal insufficiency is presented. It appeared to be owing to a phasic specific defect of the renal tubule cells that at first prevented the reabsorption of water and later the reabsorption of sodium and chloride.

1704 Miramonte Avenue, Mountain View.

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EDITORIAL

"MD-Plan 65"

JUNE IS THE enrollment month for California Physicians' Service "MD-Plan 65."

This is the plan designed to provide professional services for people of 65 years of age or more, a voluntary plan which has been approved by the House of Delegates of the California Medical Association, the Trustees of California Physicians' Service and representatives of several organized groups of our older citizens.

On a pilot basis, C.P.S. this month will accept applications for medical and surgical services from the older age group and the physicians of California will agree to provide their services under a lowered schedule of fees supplemented by co-payments by beneficiary members.

The plan being offered will cover professional services only, since these are the only services the physicians are able to supply under their own control. Hospital, drug, appliance and other costs will not be included.

In broad terms, the plan proposes to meet the costs of home, office and hospital visits by physicians on the aged participants, the plan paying on the basis of 60 per cent of the usual fees which would result from application of a factor of five to the Relative Value Study. The patient will be asked to supplement this reduced fee by paying $1 for each visit; the physician contributes by dropping the other dollar from his usual fee.

The co-payment by the member is intended to curb any abuse or overuse of the plan and to keep the member conscious of his own obligation to make the program work. This payment will be collected only for physicians' visits, x-rays and laboratory work, and will not be expected if the service rendered is a surgical procedure or is x-ray therapy for cancer.

Another factor in the co-payment arrangement is that such payments will be asked only where the individual member has an annual income below $3,000 for a single person or $4,500 for a family. If the annual income is above those limits, the physician will be entitled to collect from the patient the difference between the payment made by C.P.S. and the usual fee for the same service. It is anticipated that most persons who purchase this service will be below the income ceilings.

Professional services will be supplied for all conditions, with the single exception that a six-month waiting period will be enforced for preexisting conditions or those for which the patient has received services within six months preceding his enrollment in the program. Where the subscriber carries additional insurance, a system of subrogation of costs will be provided.

The above detail is given as an indication of the care with which the Board of Trustees of C.P.S. has approached the problem of meeting the medical care need of older people on an empirical basis. As has been pointed out here before, experience tables for this age group are, at the best, skimpy; present health insurance plans have tended to eliminate members when they reach age 65.

With experience still an unknown factor, and with enrollment figures unknown while the initial enrollment period is open, officials of C.P.S. and C.M.A. alike are at work on the question of how the program is to be financed. If utilization of services soars to unexpected heights, who is to meet the cost of the payments guaranteed by C.P.S. to participating physicians? This question has brought forth the moral obligation of the entire profession to meet such costs, if they do arise, rather than placing the load on those physicians who provide the service. In short, this is a professional obligation rather than a personal one.

Financial committee members of C.P.S. and C.M.A. are working on this problem in an effort to work out a method of subsidizing possible losses on the program and to minimize or eliminate the use of trust funds which are held by both bodies for the

benefit of physician members and a large segment of the public.

Inauguration of the "MD-Plan 65" follows by only a few months the discussions by the American Medical Association in Minneapolis which led to the A.M.A.'s urging all component associations to work out methods of providing care for the needy aged. Other states are at work on the same problem and, obviously, California's experiment will be carefully watched nationwide.

The term "needy aged" as used here is intended to denote the two aspects of the problem, namely, that the patient be both of a minimum age and in financial need. A current tendency, noted especially among some do-gooders, is to drop the word "needy" when referring to this group of citizens and to concentrate only on the word "aged." It takes little imagination to visualize the ridiculous situation which could result from this philosophy, where persons of considerable means would become the objects of special beneficence simply because they had passed the three-score-and-five mark. On the other hand, those who are in financial need and have reached an age level where their earnings are reduced or cut off are suitable for sympathetic professional consideration. The medical profession in this instance is following its hallowed tradition of easing or eliminating the financial burden for those who cannot assume the normal costs of medical care.

When the C.M.A. met in annual session last February and voted to inaugurate this new plan, the metropolitan press was most complimentary. It praised medicine for taking this forward step but, with tongue in cheek, stated that it remained to be seen how this program would work out in practice. We shall now see.

Cancer Control

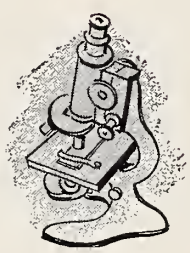
WITH THE PASSAGE of cancer control legislation, the Legislature of the State of California has taken a giant stride in protecting a desperate and therefore gullible segment of the public against the many forms of cancer quackery which have sprung up in recent years.

Cancer is so dreaded by its victims, either actual or potential, that it has offered a wide field of exploitation for promoters with an eye on the fast buck rather than the patient. Drugs, machines, diet regimes and other forms of therapy have been promoted by unscrupulous individuals who prey on their victims with all the devices formerly looked for in the itinerant medicine man. Fear, testimonials, hope and cash are the ingredients of this quackery, mingled in appropriate amounts to effect a sale.

California will now have a scientific body for testing any therapy which is advanced for the treatment of cancer. This group, to be composed mainly of physicians, will have adequate testing facilities at its command. If tests prove the therapy to be useless, the council will be able to issue cease and desist orders and, if these orders are ignored, to go into court to stop nefarious practices.

The new law could be somewhat stronger, some observers believe. However, it is a big step in the right direction and the opportunity will remain to add bolstering amendments if they are proved to be necessary.

Here is one law passed by the representatives of the people for the protection of all their constituents. The California Medical Association, American Cancer Society and their allies are to be praised for their fight in behalf of such a good law.



Annual Meeting

Ambassador Hotel

LOS ANGELES

February 21 to 24, 1960

Papers for Presentation

If you have a paper that you would like to have considered for presentation, it should be submitted *to the appropriate section secretary* (see list on this page) no later than August 21, 1959.

Scientific Exhibits

Space is available for scientific exhibits. If you would like to present an exhibit, please write immediately to the office of the California Medical Association, 450 Sutter Street, San Francisco 8, for application forms. To be given consideration by the Committee on Scientific Work, the forms, completely filled out, must be in the office of the California Medical Association no later than September 1, 1959. (No exhibit shown in 1959, and no individual who had an exhibit at the 1959 session, will be eligible until 1961.)

Medical Motion Pictures

The daytime Film Symposiums which proved so popular during the 1959 sessions will be continued in 1960. Evening film programs will be planned for doctors, their wives, nurses and ancillary personnel.

Authors desiring to show films should send their applications to Paul D. Foster, M.D., California Medical Association, 2975 Wilshire Blvd., Los Angeles 5. All authors are urged to be present at the time of showing as there will be time allotted for discussion and questions from the audience after each film.

Deadline is October 1, 1959.

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California MEDICAL ASSOCIATION

NOTICES & REPORTS

C.P.S. Medical Care Plan for "Over 65"

As requested by the C.M.A. House of Delegates at their 1959 annual meeting, C.P.S. has "proceeded with all speed" in developing and selling an experimental health plan for persons 65 years of age and over.

On June 1, C.P.S. offered throughout California the "MD-Plan 65" for persons 65 and over who reside in the state. Enrollment will continue until midnight June 30 and protection will start for all enrolled members on July 1, 1959.

Benefits of the plan are in line with those authorized by the House of Delegates in accepting the recommendations contained in the report of the C.M.A. Special Committee on needs of the aging. These benefits are listed in the adjoining box. The price of the plan for subscribers is $6.90 a month for men and $7.90 for women.

A new approach was taken in establishing benefits and rates of this test program. Recognizing the medical requirements of persons 65 and over, the House of Delegates approved the recommendation that physician members provide their services at lower than usual fees and that provision be made for out-patient benefits which are not offered by any other plan. No contract provision was made for hospitalization, nursing care or drugs because these services cannot be provided by physicians at reduced costs.

C.P.S. fees for this program are in accordance with the action of the House of Delegates which approved a schedule based on 60 per cent of the $5 conversion factor of the C.M.A. Relative Value Study ($3 per unit).

Co-Payment Principle

The co-payment principle is being introduced into this program to control costs. This means that, in addition to the C.P.S. payment to physicians, members of the "MD-Plan 65" will make a co-payment of $1 per unit for visits, for x-ray examinations and for laboratory services. Co-payments are *not* required for surgical operation of any kind or for x-ray therapy for cancer.

All "MD-Plan 65" members are notified of the co-payment principle. Whether or not this deterrent to needless use of benefits will have the intended effect will depend largely upon the physician's co-operation in collecting the co-payment from the member as part of his fee.

Before the effective date of contract benefits, July 1, medical assistants should be advised of the need to request this co-payment. Each member will be identified by a special green identification card marked "MD-Plan 65." When such a card is presented, the medical assistant should remind the member of the co-payment required.

Income Provisions

The co-payment should be collected from all C.P.S. "MD-Plan 65" members whose annual gross income is $3,000 or less for a single person or $4,500 or less for a married couple. (It is expected that most persons purchasing this coverage will have incomes below these levels.)

Members whose annual incomes are higher than these amounts may be charged the difference between the C.P.S. payment and the physician's usual fee. In this case, however, fees should be discussed in advance of service.

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Waiting Period

The majority of members will be entitled to all contract benefits effective July 1. The contract year mentioned in the benefits is for 12 months starting with the effective date. There will be a six-month waiting period, however, for service benefits on any existing condition for which the member has received medical treatment or advice during a six-month period preceding his membership.

Exclusions are generally the same as those which apply to other C.P.S. contracts.

No individual member of this plan will have his contract terminated or have his benefits or rates changed unless all other members of "MD-Plan 65" are likewise affected.

Other Coverage

A member of the "MD-Plan 65" may not hold any other C.P.S. contract. If the member is covered by a *commercial* insurance company, C.P.S. will pay for contract benefits but the physician need not accept C.P.S. fees as full payment. C.P.S. will not pay for the *same* services received as benefits from any other *service* plan.

Information to Members

In addition to the membership card and service agreement (contract), each "MD-Plan 65" member will receive a booklet fully describing the coverage, requirements and procedures of the contract, and a folder giving examples of co-payments.

Members will pay C.P.S. monthly by mailing their remittance with billing cards which are sent to them in advance. If a member fails to pay his dues in time (a 10-day grace period is being allowed), his membership will be dropped and reinstatement will not be possible until another enrollment period is announced. No further enrollment period is anticipated until experience on this program has been gained.

Information to Physicians

Representatives of C.P.S. physician relations department will be glad to assist any physician or medical assistant who has questions on this program.

It is the hope of the Special Committee of the C.P.S. Board of Trustees that this test program may lead to a new answer to the problem of caring for the aged—medicine's answer, rather than the government's.

BENEFITS OF "MD-PLAN 65"

SURGICAL BENEFITS (for Illness or Injury)

YOUR PLAN provides surgical benefits *as often as needed in or out of the hospital* for:

- **Operations involving cutting.**
- **Repair of fractures, dislocations, wounds and burns.**

Benefits include separate payments for services of the following:

- **Surgeon**
- **Assistant surgeon**
- **Anesthetist**

PHYSICIAN VISITS IN THE HOSPITAL (for Illness or Injury)

YOUR PLAN provides payments to physicians for the following services *up to 31 days each contract year:*

- **Visits to the hospital as required, beginning with the first call.**
- **Extra time spent when a physician is detained to treat a member in critical condition.**
- **Services of consultants when requested by your physician.**
- **Necessary preoperative and postoperative treatment.**
- **X-ray or radium therapy for cancer or other malignancies.**

HOME AND OFFICE VISITS (for Illness or Injury)

YOUR PLAN provides payments for services of physicians *up to 50 visits each contract year,* including payments for the following:

- **Visits in the physician's office or your home, beginning with the first visit.**
- **Extra time spent when a physician is detained to treat a member in critical condition.**
- **Services of consultants when required and requested by your physician.**
- **Necessary preoperative and postoperative treatment.**
- **X-ray or radium therapy for cancer or other malignancies.**

DIAGNOSTIC X-RAY AND LABORATORY SERVICES

YOUR PLAN provides for payments in accordance with the fee schedule *up to $50 each contract year* for out-patient diagnostic x-ray examinations and laboratory services.

Council Meeting Minutes

Tentative Draft: Minutes of the 448th Meeting of the Council, Rickey's Inn, Palo Alto, April 11, 1959.

The meeting was called to order by Chairman Lum at Rickey's Inn, Palo Alto, California, on Saturday, April 11, 1959, at 9:30 a.m.

Roll Call:

Present were President Reynolds, President-Elect Foster, Speaker Doyle, Vice-Speaker Heron, Editor Wilbur, Secretary Hosmer and Councilors MacLaggan, Wheeler, Todd, Quinn, O'Neill, Kirchner, O'Connor, Shaw, Gifford, Davis, Sherman, Campbell, Lum, Bostick and Teall. Absent for cause, Councilor Harrington.

Present by invitation were Messrs. Hunton, Clancy, Thomas, Whelan, Collins, Marvin and Edwards of C.M.A. staff; Messrs. Hassard and Huber of legal counsel; county society executives Scheuber of Alameda-Contra Costa, Grove of Monterey, Rosenow and Pettis of Los Angeles, Bannister of Orange, Brayer of Riverside, Donmyer of San Bernardino, Nute of San Diego, Neick of San Francisco, Thompson of San Joaquin, Donovan and Colvin of Santa Clara and Dermott of Sonoma; Doctor Marshall Porter of the State Department of Mental Hygiene; Doctor Fred Kriete of the State Department of Public Health; Doctor A. E. Larsen and Mr. Richard Lyon of California Physicians' service; Doctors Lucius Button, Cedric Johnson and Robert Butler of Sonoma County; Doctor Edward Liston of Santa Clara County; and Doctors W. F. B. Harding, J. Lafe Ludwig, Francis E. West and John Rumsey.

The chairman introduced Dr. Matthew N. Hosmer, newly appointed secretary. The chairman also expressed thanks to the Santa Clara County Medical Society for the arrangements made for the meeting.

1. *Minutes for Approval:*

On motion duly made and seconded, minutes of the 447th meeting of the Council, held March 14, 1959, were approved.

2. *Membership:*

(a) A report of membership as of April 9, 1959, was presented and ordered filed.

(b) On motion duly made and seconded, 101 delinquent members whose dues had been received were voted reinstatement.

(c) On motion duly made and seconded in each instance, four applicants were voted Retired Membership. These were: Harry W. Murphy, Los Angeles County; Ambrose E. Edgerton, San Francisco County; Herbert S. Chapman, San Joaquin County, and Merlin T. R. Maynard, Santa Clara County.

(d) On motion duly made and seconded in each instance, 23 applicants were voted Associate Membership. These were: Joseph R. Bateman, William R. Haas, Pearl A. Williams, Alameda-Contra Costa County; Otto Arndal, Milton R. Cohen, Edgar E. Hamer, L. T. Lawrence, Jr., Harold L. Snow, Los Angeles County; Ernest V. Orsborn, Napa County; Paul G. Buss, Orange County; Wallace R. Holter, Pearson C. Kellogg, Sacramento County; George M. Davies, Elvin C. Hedrick, San Bernardino County; John M. Murphy, San Diego County; Joseph Di Caprio, John J. Hutchings, William Mandel, Manuel L. Weber, San Francisco County; Arthur W. Anderson, Russell L. Gould, Santa Clara County; W. H. Lorack, Ventura County, and M. L. Young, Ventura County.

(e) On motion duly made and seconded, reductions in dues were voted for 18 members because of illness or postgraduate studies.

3. *Reports of Officers:*

(a) President Reynolds reported on several meetings he had attended recently, especially that of the ad hoc Committee on Problems of the Aging. He recommended that the present ad hoc committee continue as consultants in this field for the next month, at which time the committee would cease and its business turned back to the Council. On motion duly made and seconded, this action was approved.

(b) Speaker Doyle reported that he had not yet received nominees from all councilor districts for members of a committee to prepare a format for a vote on Social Security inclusion of physicians but that he proposed to appoint this committee at the earliest possible date.

4. *Financial:*

Chairman Heron of the Committee on Finance presented a report on bank balances, loans, etc., as of April 9, 1959, which was ordered filed.

Mr. Hunton sought instructions on the inclusion of Association officers in the 1959 A.M.A. annual session; it was agreed that the authorized officers should attend this session.

The chairman reported that Pacific Magnetic Tape Equipment Co., a wholly-owned subsidiary, has paid a dividend of $900 on the stock owned by the Association.

Dr. Heron reported that the Finance Committee had reviewed the request of Physicians Aid of Los Angeles for a loan to aid in construction of a nursing home and the request was being presented to the Council without recommendation.

On motion duly made and seconded, it was voted to request the Board of Trustees of Physicians Benevolence Fund, Inc., to make a loan of $50,000, under proper security and at an annual interest rate of 2½ per cent, to Physicians Aid.

On motion duly made and seconded, it was voted to request Physicians Aid to lend assistance to the

Council or to county medical societies in the establishment of facilities for the care of needy physicians or their families in other areas.

5. *California Medicine:*

Editor Wilbur requested the appointment of Dr. Don King of San Francisco as a member of the Editorial Board of CALIFORNIA MEDICINE for orthopedic surgery, to succeed the late Frederick C. Bost. On motion duly made and seconded, the appointment was approved.

6. *Commission on Medical Services:*

Councilor Sherman, chairman of the Liaison Committee with the State Department of Public Welfare, gave a progress report for the committee.

Dr. John F. Murray, chairman of a subcommittee on medical foundations, presented, through the chairman, a report by the committee on its recent activities.

7. *Commission on Public Agencies:*

Councilor Bostick reported that the school health conference planned for late April had been put over until fall because of meeting conflicts.

Dr. Bostick also reported that the commission was maintaining surveillance over the problems of radiation.

Dr. Bostick also reported that the commission was working on the problem of separating professional from hospital services under the Crippled Children's Program. On motion duly made and seconded, it was voted to refer this matter to the joint committees of the Association and the California Hospital Association for prompt action.

8. *Commission on Community Health Services:*

Councilor MacLaggan reported that the Commission on Community Health Services had scheduled a meeting at which a quorum was not present. Those present discussed the resolutions on exfoliative cytology adopted by the 1959 House of Delegates and a report on this discussion is to be circulated to the members of the commission and, with their approval, presented to the Council.

9. *Commission on Public Policy:*

(a) Dr. J. Lafe Ludwig, representing the Committee on Legislation, reported on several bills now before Congress.

Mr. Salisbury reported on several bills pending before the State Legislature. Relative to Senate Bill No. 100, a bill to provide for control by the State Insurance Commissioner of all service contracts for health and welfare benefits, it was regularly moved, seconded and voted to authorize the Committee on Legislation, working with legal counsel to act as required in consultation with the Committee for Emergency Action.

Councilor Quinn proposed that the Council support Assembly Bill 847, relative to court-appointed expert medical witnesses. On motion duly made and seconded, it was voted to instruct the Committee on Legislation to support this proposal.

Mr. Huber reported that a bill had been drafted and introduced in conformity with Resolution No. 53 of the 1959 House of Delegates, relating to unprofessional conduct.

On a proposal that the Committee on Legislation be authorized to discuss with representatives of the Legislature and with state officials the types of fee schedules and insurance programs that might be used by the state in budgeting funds, it was regularly moved, seconded and voted that such authority be granted, the Committee on Legislation to work with the Committee for Emergency Action and such others as that committee might name.

On motion duly made and seconded, it was voted to approve a proposal that a five-man liaison committee of the Commission on Medical Services be established with authority to offer its services to the Vocational Rehabilitation Service and the regional representatives of the Bureau of Old Age and Survivors' Insurance as a liaison group for the Council.

(b) Dr. Malcolm S. M. Watts, chairman of the Committee on Public Relations, reported that the committee had met the preceding evening and had recommended that one or more field representatives be employed to keep county medical societies advised on the progress of federal legislation. On motion duly made and seconded, it was voted to refer this proposal to the Committee on Legislation for further study and report to the Council.

Dr. Watts reported on Resolution No. 37 of the 1959 House of Delegates, which called for a study of the cost of medical care under government auspices to the taxpayer. The committee did not feel adequately equipped to handle such a study. On motion duly made and seconded, it was voted to refer this matter to the Commission on Medical Services.

Dr. Watts also reported that a television program in the San Francisco Bay Area which had been regarded as an excellent public relations medium, is about to be discontinued because of lack of sponsorship. On motion duly made and seconded, it was voted to encourage programs of this type under the sponsorship of county societies or other sponsors approved by them.

Councilor Gifford offered several suggestions for public relations activities, which he will forward to the Committee.

10. *Commission on Professional Education:*

Dr. Albert C. Daniels, chairman of the Committee on Scientific Work, reported on a meeting of the committee, at which several suggestions were made

for improving the scientific content of the Annual Session. Among these were (1) changes in the meeting dates of the House of Delegates, to allow three days between sessions, possibly meeting Saturday evening, Sunday morning and Wednesday or on Saturday-Wednesday or Sunday-Thursday; (2) a return to February meeting dates as a means of avoiding conflicting meetings which detract from the scientific program and from attendance; and (3) elimination of the annual President's Dinner or combining it with activities of the Woman's Auxiliary.

11. *Commission on Professional Welfare:*

Councilor Kirchner, chairman of the Medical Review and Advisory Board, reported that the board was planning to set up a fact-finding and educational program to determine the coverage for professional liability carried by members and to educate members in the need of adequate coverage. He cited samplings which indicated inadequate coverage or lack of coverage in some areas. Further report will be made to the Council.

12. *State Department of Public Health:*

Dr. Fred Kriete reported that the State Department of Public Health had investigated several cases where excessive radiation had been found in shipments of tuna fish, tea and other items. He requested Association support of the department's request for funds to study and control radiation hazards.

Dr. Kriete also reported that paralytic poliomyelitis cases were running about 50 per cent higher than in 1958 but still below the 1957 level. Studies by the department indicate that half the children in California below age five have had no poliomyelitis inoculations.

13. *State Department of Mental Hygiene:*

Dr. Marshall Porter reported that 12 California areas have now established mental health centers under terms of the Short-Doyle Act and that, under the terms of the law, the advisory board to the Department of Mental Hygiene will consist of representatives of these areas. Prior to this time the advisory board was the California Conference of Local Health Officers.

14. *Commission and Committee Activities:*

Councilor Teall raised the question as to where the authority rested to assure activities by the commissions and committees. It was regularly moved, seconded and voted that the chairman appoint a small committee to consider this matter, the President, President-Elect, Council Chairman and Speaker to be included.

15. *Committee on Nominations:*

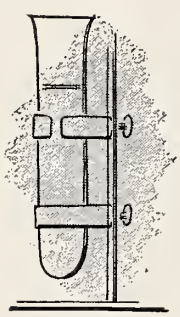
Councilor Bostick, chairman of the Committee on Nominations, requested that Drs. Arlo A. Morrison and John B. deC. M. Saunders be appointed members of the Bureau of Research and Planning. On motion duly made and seconded, these appointments were voted.

On recommendation of the committee, and on motion duly made and seconded, Dr. Sol R. Baker of Beverly Hills was voted appointment as a member of the Advisory Committee to the Cancer Commission.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 4:20 p.m.

DONALD D. LUM, M.D., *Chairman*
MATTHEW N. HOSMER, M.D., *Secretary*



Alson R. Kilgore, M.D.

THE YEAR was in the early 1930's, the time of day about 8 p.m., and Lane Hall was well filled. A slender figure in dinner jacket commenced to speak on "Modern Aspects of Cancer Diagnosis and Therapy." He spoke for exactly 60 minutes, without notes, and with but a modicum of lantern slides. His lecture was clear, complete and delivered with the modesty of an able man. This was my own introduction to Alson Kilgore as a teacher, and the first of many of his lectures which I was privileged to hear. The applause and appreciation were as sincere then as on the many other occasions.

Born in Oakland in 1887, Dr. Kilgore graduated from the University of California in 1909 and the Harvard Medical School in 1913. Following a surgical residency at Parnassus Heights, he spent three years in China under the auspices of the Rockefeller Foundation. On his return, he served in the United States Navy in World War I and then had a year as teacher at Johns Hopkins Medical School.

Returning to San Francisco in 1920, Dr. Kilgore developed an extensive surgical practice, coupled with outstanding work in the organizational phases of his profession. The appreciation of his efforts resulted in his election to offices in his county and state medical societies, to the founding membership of the Cancer Commission, of the Public Health League, of the California Physicians' Service and of many other outstanding organizations.

To appreciate the greatness and catholicity of this man it may be worth recapitulating some of the many professional, organizational and personal aspects of his career.

In his chosen specialty, his work as a surgeon was noteworthy and recognized in many ways. He was for a long time Clinical Professor of Surgery on the University of California staff, and his lectures in surgical pathology at the San Francisco Hospital attracted a wide audience of students. He published numerous papers, one valuable series dealing with problems pertaining to diseases of the female breast. His work resulted in his being elected chief surgeon for the Western Pacific Railroad, chief of staff at the St. Joseph's Hospital, San Francisco, and innumerable other societies such as the American Surgical Association, the American College of Surgeons and various local and state surgical bodies. He was one of the founders of the American Board of Surgery. He fought cancer quackery without fear and faced a colossus of Hyde Street when the latter persisted in the adrenal cortex "treatment" of cancer after its ineffectiveness had been established.

In his organizational work, he led in the development of the Medical Economics Study Group of San Francisco, the Health Section of the Commonwealth Club, the first Blue Shield Plan of California and one of the first prepaid hospital plans. At the same time that he was investigating and lecturing on surgical advances in cancer, he was investigating means for the better distribution of medical and hospital services. With the late equally distinguished T. Henshaw Kelly and Morton R. Gibbons, he became one of the pioneer "Triumvirs of Health Insurance." Indeed, he was nationally recognized in this field 21 years ago.

His personal hobbies included sailing, fishing and the gentle mathematics of white spots on a black background. He was a collector of fine printings, such as those of John Henry Nash and the Grabhorn Brothers. When he finally laid down his scalpel a few years ago, he extended his mathematical investigations into the Dow theory of oscillations, exhibiting the same enthusiasm and proficiency in the estimation of daily stock market averages as he had in the evaluation of common medical and economic problems.

Alson Kilgore concealed a tense and healthy discontent under a calm exterior. I personally never heard him raise his voice in the surgical suite or in the clinic. He achieved compliance and cooperation with quiet authority and pervading kindness. At tumor conferences and ward rounds he was charitable to a fault, but when methods were persistently slipshod he took firm steps to have the offender educated or relieved of his responsibility.

It has been said that there can be no greatness without abandonment, and I believe it fair to say that Alson abandoned himself to the improvement of medical practice and especially to the improvement of surgery to an almost unique degree. One of the many living tributes to his work is the Cancer Commission of the California Medical Association. Many western physicians do not know that this body is nationally recognized for its work in improving and aiding education, service and research in the field of cancer. An additional indication of his interest in this field was the published request of his family that those desiring to send appreciations may, if they wish, do so in the name of the St. Joseph's Hospital Cancer Fund, San Francisco. Dr. Kilgore died at St. Joseph's Hospital on May 20, 1959.

"Truly the light is sweet, and a pleasant thing it is for the eyes to behold the sun." To his widow and the other members of his family the members of this Association extend their deep gratitude and their sincere sympathy. California and American medicine owe much to this great man.

L. HENRY GARLAND

In Memoriam

ALEXANDER, ROBERT BERTHOD. Died in San Francisco, April 19, 1959, aged 65, of heart disease. Graduate of Schlesiche-Friedrich-Wilhelms-Universitat Medizinische Fakultat, Breslau, Prussia, 1925. Licensed in California in 1940. Doctor Alexander was a member of the San Francisco Medical Society.

✤

ASHCROFT, FELIX E. Died December 30, 1958, aged 87. Graduate of Rush Medical College, Chicago, Illinois, 1901. Licensed in California in 1901. Doctor Ashcroft was a retired member of the San Diego County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✤

BEAUCHAMP, HARRY H. Died in Sacramento, January 21, 1959, aged 86. Graduate of Miami Medical College, Cincinnati, Ohio, 1904. Licensed in California in 1906. Doctor Beauchamp was a retired member of the Sacramento Society for Medical Improvement and the California Medical Association, and an associate member of the American Medical Association.

✤

FRITSCHI, ULRICH A. Died in Sacramento, April 5, 1959, aged 51, of carcinoma of the esophagus. Graduate of University of California School of Medicine, Berkeley-San Francisco, 1941. Licensed in California in 1941. Doctor Fritschi was a member of the Sacramento Society for Medical Improvement.

✤

HANE, RICHARD LINCOLN. Died in Monterey, January 25, 1959, aged 58. Graduate of Ohio State University College of Medicine, Columbus, Ohio, 1924. Licensed in California in 1946. Doctor Hane was a member of the Monterey County Medical Society.

✤

JOHANNESEN, ROBERT EASTNOR. Died in Altadena, April 2, 1959, aged 61. Graduate of Rush Medical College, Chicago, Illinois, 1928. Licensed in California in 1945. Doctor Johannesen was a member of the Los Angeles County Medical Association.

✤

KILGORE, ALSON R. Died in San Francisco, May 20, 1959, aged 72. Graduate of Harvard Medical School, Boston, 1913. Licensed in California in 1914. Doctor Kilgore was a retired member of the San Francisco Medical Society and the California Medical Association, and an associate member of the American Medical Association.

KORAVKO, MSTISLAV KLEMENT. Died in San Francisco, April 13, 1959, aged 70. Graduate of University of Moscow Faculty of Medicine, Moscow, Russia, 1919. Licensed in California in 1932. Doctor Koravko was a member of the San Francisco Medical Society.

✤

KRACAW, FOREST CHARLES. Died in Oakland, April 6, 1959, aged 67. Graduate of Marquette University School of Medicine, Milwaukee, Wisconsin, 1916. Licensed in California in 1919. Doctor Kracaw was an Associate Member of the Alameda-Contra Costa Medical Association.

✤

LONG, JOHN BRADLEY. Died April 9, 1959, aged 36, of cancer. Graduate of New York University College of Medicine, New York, 1946. Licensed in California in 1951. Doctor Long was a member of the San Francisco Medical Society.

✤

MCNEIL, DONALD. Died in San Francisco, February 23, 1959, aged 61, of heart disease. Graduate of Harvard Medical School, Boston, Massachusetts, 1926. Licensed in California in 1931. Doctor McNeil was a member of the Sacramento Society for Medical Improvement.

✤

MUNFORD, RAYMOND HUNTER. Died April 15, 1959, aged 80. Graduate of Kansas Medical College, Topeka, Kansas, 1907. Licensed in California in 1924. Doctor Munford was a member of the Orange County Medical Association.

✤

NEVIN, JOHN LEWIS. Died in San Bernardino, April 7, 1959, aged 67. Graduate of State University of Iowa College of Medicine, Iowa City, Iowa, 1918. Licensed in California in 1927. Doctor Nevin was a member of the San Bernardino County Medical Society.

✤

NEWELL, EDWARD. Died in San Jose, April 21, 1959, aged 85. Graduate of College of Physicians and Surgeons of San Francisco, 1905. Licensed in California in 1905. Doctor Newell was a retired member of the Santa Clara County Medical Society and the California Medical Association, and an associate member of the American Medical Association.

✤

SCOTT, RAYMOND ROBERT. Died in Selma, December 1, 1958, aged 59, of cerebral vascular accident. Graduate of Stanford University School of Medicine, Stanford-San Francisco, 1926. Licensed in California in 1926. Doctor Scott was a member of the Fresno County Medical Society.

PUBLIC HEALTH REPORT

MALCOLM H. MERRILL, *M.D., M.P.H.*
Director, California State Department of Public Health

THE PROMPT RECOGNITION of fungus infections was emphasized at a three-day workshop in which local health department representatives and state college instructors learned methods of working with and identifying fungi of medical importance.

With the increasing widespread use of antibiotics the problem of secondary fungus infections is coming more into prominence. The ability of local microbiologists to recognize specific types of fungus infections will contribute to the better control of epidemic types of fungus disease through proper lines of treatment.

The course was conducted by the staff of the department's Microbiology Laboratory, assisted by Dr. Lucille Georg of the U. S. Public Health Service.

* * *

A $200,000 federal grant for a three-year study of the drinking habits of Californians has been awarded the department. The project, financed by the National Institute of Mental Health, will be the first of its kind in the United States and will be concerned with finding ways to determine how and why people drink and how drinking practices are related to everyday life.

Types of information sought will include kinds, amounts and frequency and regularity of ingestion of alcohol, the context of drinking (places, companions, rituals), reasons for drinking, attitudes about conditions attending drinking (driving, teenage, business lunches), individual and group consequences of drinking, and sub-populations which use alcoholic beverages, with special attention to teenage drinking.

* * *

The department's Advisory Committee on Air Sanitation met April 28 in Los Angeles to review the subject of air standards for atmosphere and motor vehicle exhausts.

An early consideration of this matter was important because of the Governor's program in air pollution, the pending legislation requiring this department to establish standards, and the short period of time that will be available to develop such standards before February 1, 1960.

* * *

Influenza has become increasingly prevalent in California since it first made its appearance in significant numbers in mid-February. The high school population has been the most affected so far.

In a two-week period in late April and early May, deaths from influenza and pneumonia were above the epidemic threshold, according to reports from eight California cities. There were 64 such deaths during this period April 24 to May 8. This compares with 110 deaths reported from these cities during a period of two weeks at the peak of the previous epidemic in December, 1957.

* * *

On April 17 the State Board of Public Health adopted regulations relating to the operation of Human Tissue Banks and other tissue preservation services. These are the first such regulations to be established in the nation.

* * *

A regional school nursing institute for representatives of seven mountain counties was held recently in Redding, co-sponsored by this department and the State Department of Education.

Discussion topics included health counseling, mental health in school health service, functions of school nurses in elementary and secondary schools, control of communicable diseases, nuisance diseases, and legal problems relating to school health.

Participating in the institute were physicians in private practice, school administrators and supervisors, school nurses, a clinical psychologist, health officers, housewives and public health nurses. They represented the counties of Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama and Trinity.

NINTH ANNUAL
REGIONAL POSTGRADUATE INSTITUTE
SACRAMENTO VALLEY COUNTIES

Presented by Committee on Postgraduate Activities of the California Medical Association, in cooperation with the Sacramento Valley County Medical Societies and University of Southern California School of Medicine, Phil R. Manning, M.D., Assistant Professor of Medicine; Associate Dean Postgraduate Division.

Tahoe Tavern, Lake Tahoe

JUNE 25 AND 26, 1959

PROGRAM

LECTURES—THURSDAY, JUNE 25

9:00 a.m.—The Third Compartment—Clarence J. Berne, M.D.

"... but if the water come to him and drown him, he drowns not himself."

10:00 a.m.—Glaucoma in General Practice with Display Techniques—Introduction by John Berg, M.D., Richard L. Kasper, M.D.

"... He that is stricken blind cannot forget the precious treasure of his eyesight lost."

11:00 a.m.—Advances in the Office Diagnosis of Diseases of the Ear—Alden H. Miller, M.D.

"... Vexing the dull ear of a drowsy man."

12:00 to 2:00 p.m.—Lunch.

2:00 p.m.—Drugs and the Patient's Pocketbook—Phil R. Manning, M.D., Donald W. Petit, M.D.

"... Rob me the exchequer."

3:00 p.m.—Commonly Overtreated Pediatric Variations—William H. Bucher, M.D.

"... Nature hath framed strange fellows in her time."

8:00 p.m.—Dinner, Professional Entertainment and Informal Dancing to follow.

CONCURRENT SEMINARS—THURSDAY, JUNE 25

Panel 1—GREEN ROOM

10:00 a.m.—Seminar on Liver Disease.

"... And let my liver rather heat—than—cool with mortifying groans."

11:00 a.m.—Seminar on Liver Disease (continued).

2:00 p.m.—Problems in X-ray Diagnosis and Therapy.

"... Diseases desperate grown by desperate appliances are relieved, or not at all."

3:00 p.m.—Problems in X-ray Diagnosis and Therapy (continued).

Panel 2—LOBBY LOUNGE

10:00 a.m.—Geriatric Gynecology.

"... And that which should accompany old age."

11:00 a.m.—Foot Problems.

"... A mender of bad soles . . . a surgeon to old shoes."

2:00 p.m.—Cerebral Vascular Diseases.

"... The time have been that, when the brains were out, the man would die, and there an end; but now they rise again."

3:00 p.m.—Medical CPC.

"... Death's a great disguiser."

LECTURES—FRIDAY, JUNE 26

9:00 a.m.—Determination of Self-Sealing Ruptured Peptic Ulcer—Clarence J. Berne, M.D.

"... It will but skin and film the ulcerous place, whiles rank corruption, mining all within infects unseen."

10:00 a.m.—Low Back Pain—Lorin L. Stephens, M.D.

"... Thou cold sciatica, cripple our senators that their limbs may halt as lamely as their manners."

11:00 a.m.—Current Management of Disorders of Nose and Throat—Alden H. Miller, M.D.

"... Many can brook the weather that love not the wind."

12:00 to 2:00 p.m.—Lunch.

2:00 p.m.—Variations and Clinical Uses of the Adrenal Steroids—Phil R. Manning, M.D., Donald W. Petit, M.D.

"... Find out the cause of this effect, or rather say, the cause of this defect. For this effect defective comes the cause."

3:00 p.m.—Developments in the Management of Epilepsy—Karl O. Von Hagen, M.D., William H. Bucher, M.D.

"... Sits as one new—risen from a dream."

CONCURRENT SEMINARS—FRIDAY, JUNE 26

Panel 1—GREEN ROOM

10:00 a.m.—Seminar on the Management of the Patient with Coronary Artery Disease.
"... Now cracks a noble heart."

11:00 a.m.—Seminar on the Management of the Patient with Coronary Artery Disease (continued).

2:00 p.m.—Diagnostic X-ray Conferenees.
"... We will draw the curtain and show you the picture."

3:00 p.m.—Diagnostie X-ray Conferenees (continued).

Panel 2—LOBBY LOUNGE

10:00 a.m.—Toxemia of Pregnancy.
"... Great with child and longing for stewed prunes."

11:00 a.m.—Office Ophthalmology with Emphasis on Rx of Emergencies and Industrial Injuries.
"... It adds a precious seeing to the eye."

2:00 p.m.—Painful Syndrome of the Neek and Upper Extremities.
"... Cursed be he that moves my bones."

3:00 p.m.—Surgical CPC.
"... With the help of a surgeon, he might yet recover."

HOST: Sacramento Society for Medical Improvement . . . **REGIONAL CHAIRMAN:** Robert H. Quillinan, M.D., 616 Alhambra Boulevard, Sacramento, Calif. . . . **Institute Fee:** $25.00. For additional information, contact Postgraduate Activities office, California Medical Association, 2975 Wilshire Boulevard, Los Angeles 5. **All California Medical Association members and their families are cordially invited to attend.**

For Your Patients—A number of specialists have asked that a slight copy change be made in Message No. 1. This has been done and now Message No. 1A is available as well as Message No. 1.

A Personal Message to YOU:

I consider it both a privilege and a matter of duty to be available in case of an emergency. However, you can understand that there are times when I may not be on call. I might be at a medical meeting outside the city, on a bit of a vacation—or even ill.

Consequently, I thought it would be a good precaution if—on this gummed paper which you can paste in your telephone book or in your medicine cabinet—I listed numbers where I can be reached at all times. Also, the number of a capable associate as an added service. Here they are:

_____	_____	_____
OFFICE	HOME	MY DOCTOR
_____	_____	_____
OFFICE	HOME	ASSOCIATE DOCTOR

Sincerely,

_____, M.D.

MESSAGE NO. 1A. Attractive, postcard-size leaflets printed on gummed paper, you to fill in telephone numbers and your signature. Available in ony quantity, ot no chorge, os onother service to CMA members. Please order by Messoge Number from CMA, PR Department, 450 Sutter, San Froncisco.

WOMAN'S AUXILIARY
TO THE CALIFORNIA MEDICAL ASSOCIATION

To the president of the Woman's Auxiliary to the California Medical Association comes the pleasant privilege of visiting the component county auxiliaries during the year, of meeting with the Auxiliary members in their home communities and of hearing reports that are given by the committee chairmen on the specific projects they have undertaken in their counties.

In every instance they are working together to cultivate and promote good public relations. Thousands of hours are spent each year on community service. We have members serving on local school boards, in Parent-Teacher Associations, at the rehabilitation and health centers, to name but a few.

These are all volunteer workers, making a valuable contribution of service to the community and helping to develop good public relations for both the Auxiliary and the county medical society.

When I visited Santa Cruz County Auxiliary in April I learned about its active Health Careers program. There are three career clubs in the county high schools, with an auxiliary member in charge of program in each club. During the past year Mrs. James Spencer served as program chairman for the Future Nurses Club of Watsonville High School, Mrs. George McCormick for the Medical Arts Club of San Lorenzo Valley High School and Mrs. Robert Wiese for the Health Careers Club of Santa Cruz High School.

Some of the clubs meet weekly during the lunch hour and others bi-weekly or monthly. Speakers during the year have been specialists in their chosen paramedical field. Their subjects have included talks on occupational therapy, physical therapy, laboratory technology, pharmacy, psychology, psychiatric social work and medical secretarial work as well as nursing.

Each speaker explains to the students the type of work he does, the education and training required, the opportunities that are available in his field of work and the salaries that may be expected. The students are advised what courses are necessary in their high school program to plan for a career. In addition to speakers, many educational films have been shown at the meetings. Field trips have been made to the x-ray and pathology laboratories in Santa Cruz and to the Children's Orthopedic School in Capitola.

During the Easter vacation, the Santa Cruz and San Lorenzo Valley high schools made an all-day tour to the University of California Medical School in San Francisco. The Watsonville group made a similar trip to the Santa Clara County Hospital.

The Santa Cruz High School club is the nucleus of the newly formed County Hospital Junior Auxiliary. Each girl spends two or three hours weekly in volunteer service at the hospital. They help to serve trays, feed patients and work in the laboratory and central-supply room. These girls are well received both by hospital personnel and by patients, who look forward to seeing their bright young faces.

The Auxiliary members in charge of these clubs have compiled sufficient material to enable them to offer a fairly complete counseling service for students seeking information concerning a particular paramedical career.

A new and very important project will be undertaken by the Woman's Auxiliary to the California Medical Association this year. At the recommendation of Dr. T. Eric Reynolds, president of the C.M.A. and chairman of the ad hoc committee on care of the aged, we will assist the California Medical Association in its senior citizens program. In order to establish an information center, to inform people about the available types of care now in existence for senior citizens, each county Auxiliary will be asked to cooperate in making a survey to determine just what is available in the way of day-hospitals, visiting nurses, nursing homes, occupation and hobby programs in its community.

Mrs. Theodore A. Poska
President, Woman's Auxiliary to the California Medical Association

NEWS & NOTES

NATIONAL • STATE • COUNTY

IMPERIAL

Dr. Burke Schoensee has been appointed county physician for Imperial County by the board of supervisors. He will serve pro tem until a full-time successor to Dr. Robert Perlman, the former occupant of the position, can be found, it was announced.

LOS ANGELES

Three grants totalling $14,177 for research were made recently by the **Los Angeles County Association for Mental Health.**

Dr. Norman Q. Brill, head of the department of psychiatry at the University of California at Los Angeles School of Medicine, was allotted $5,500 for a study of corticotropin in connection with schizophrenia. **Dr. Nicholas Bercel,** University of Southern California, received $1,000 for continuance of research on the injection of blood from schizophrenic patients into spiders, and Dr. Esther Bogen, College of Medical Evangelists, was awarded $3,100 to continue studies of relationship between mental illness and metabolism.

* * *

Dr. George V. Webster, Pasadena, was installed as president of the California Society of Plastic Surgeons at the organization's meeting in Yosemite Park in April. Dr. Harry M. Blackfield of San Francisco was elected vice-president, and Dr. Richard A. Shepard, Oakland, was reelected secretary-treasurer.

* * *

Dr. Arnold L. Freed was installed as president of the Los Angeles County Tuberculosis and Health Association at the annual meeting of the organization in April, and Dr. Samuel J. Sills was elected president-elect.

* * *

Dr. Paul O. Greeley, medical director of the student health service at University of Southern California, became president of the American College Health Association at the organization's annual meeting in Philadelphia in May.

* * *

The medical management of cancer will form a postgraduate course that will be sponsored by the University of Southern California School of Medicine. The program will be held from 7:30 to 9:30 p.m. on three Thursday evenings, July 9, 16, and 23, 1959, at Lebanon Hall, Cedars of Lebadon Hospital, Los Angeles. The program will be presented by Doctor Henry D. Diamond, chief of the lymphoma service of the Memorial Center for Cancer and Allied Diseases, New York, and author of *The Medical Management of Cancer.*

The course is intended for internists, surgeons, general practitioners, pathologists and radiologists who are interested in management of cancer. There will be a brief review of the indications for surgical and radiological therapy, but emphasis will be on medical management. Tuition is $15.00.

Registration may be accomplished through the Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33.

Dr. Joseph M. de los Reyes, Glendale, has been appointed by the Los Angeles County Board of Supervisors as a member of the County Hospital Advisory Committee.

SAN FRANCISCO

Dr. Clyde C. Greene, Jr., of San Francisco, was elected secretary-treasurer of the American Society of Internal Medicine at the organization's recent annual meeting in Chicago.

* * *

Dr. Alfred Auerback, San Francisco, was installed as speaker of the Assembly of District Branches at the recent annual meeting of the American Psychiatric Association in Philadelphia.

* * *

Dr. Henry Kaplan, professor of radiology at Stanford University School of Medicine, has been named the recipient of the second annual award by the Ann Langer Cancer Research Foundation of Chicago "for meritorious investigation by a scientist under the age of 45 in the field of cancer."

SANTA CLARA

Appointment of Dr. J. Garrott Allen of the University of Chicago Clinics as **head of the department of surgery at Stanford** University School of Medicine was announced recently by Dr. Robert H. Alway, dean of the school. The new appointee, who will assume his duties July 1, is professor of surgery and attending surgeon at the University of Chicago Clinics.

* * *

Appointment of two leading organic chemists to important research positions at Stanford University was announced recently by President Wallace Sterling. Dr. William S. Johnson, currently the Homer Adkins professor of chemistry at the University of Wisconsin, has been named head of Stanford's Chemistry and Chemical Engineering Department effective in 1960. He will replace Dr. George S. Parks, who becomes emeritus head this year. Dr. Carl Djerassi of Wayne State University, now on leave in Mexico City, is the second new appointee. He will become professor of chemistry effective September 1959, but will remain on leave for approximately another year.

The two men have outstanding records of research in steroids, antibiotics and other natural products, the announcement said. Dr. Johnson's work includes the synthesis of various sex and adrenocortical hormones used in treating arthritis and heart disease. Dr. Djerassi had a part in synthesizing cortisone and is co-inventor of the antihistamine tripelennamine (Pyribenzamine®).

GENERAL

At the 35th annual meeting of the **Western Section of the American Urological Association** held in Monterey, California, May 18 to 21, 1959, the following officers were elected: President-elect, Dr. Charles Montgomery Stewart, Los Angeles; secretary-treasurer, Dr. John W. Dorsey, Long Beach.

* * *

A symposium on **evaluation of early diagnosis of cancer** will be presented at the Annual Scientific Session of the American Cancer Society to be held October 26 and 27, 1959, Biltmore Hotel, New York.

The program is fully approved and recommended by the American Academy of General Practice for 12 hours of Category II credit for its members.

The American Urological Association has announced the opening of competition for its **annual awards** of $1,000 (first prize $500, second prize $300 and third prize $200) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been graduated not more than ten years, and to hospital interns and residents doing research work in urology.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Palmer House, Chicago, Illinois, May 16 to 19, 1960.

Full particulars may be obtained from the executive secretary of the association, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1, 1959.

POSTGRADUATE EDUCATION NOTICES

THIS BULLETIN of the dates af pastgraduate educatian programs and the meetings of various medical arganizations in California is supplied by the Cammittee on Postgraduate Activities of the Califarnia Medical Assaciatian. In order that they may be listed here, please send communicatians relating to your future medical or surgical pragrams to: Mrs. Margaret H. Griffith, Director, Postgraduate Activities, Califarnia Medical Associatian, 2975 Wilshire Baulevard, Las Angeles 5.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

Office Urology. Wednesday, June 17. Six hours. Fee: $30.00.

Surgical Technique Utilizing the Isolated Intestinal Segment in Urological Procedures. Thursday, June 18. Seven hours. Fee: $150.00.†

Eighth Annual Symposium in Clinical Laboratory Technology. Saturday and Sunday, June 20 and 21. Twelve hours. Fee: $20.00 (includes one lunch).

Workshop for School Nurses: The Nurse in the School Health Program. Monday through Friday, June 22 through July 3. Los Angeles. Fifty hours. Fee: $35.00.

Dissection of the Thorax, Abdomen and Pelvis. Wednesday and Thursday, June 24 and 25. Fourteen hours. Fee: $80.00.†

Dissection of the Extremities. Friday, June 26. Seven hours. Fee: $40.00.†

Hand Surgery. Saturday and Sunday, June 27 and 28. Twelve hours. Lecture and laboratory, $60.00.† Lecture only, $35.00.

Workshop for School Nurses: The Nurse in the School Health Program. Monday through Friday, July 6 through 17. Riverside. Fifty hours. Fee: $35.00.

Clinical Neurology. Wednesday, July 8 to August 12. Thirty-six hours. Fee: $100.00.

† Limited enrollment.

Workshop for School Nurses: The Nurse in the School Health Program. Monday through Friday, July 20 through 31. San Diego. Fifty hours. Fee: $35.00.

Infertility. Friday and Saturday, July 24 and 25. Twelve hours. Fee: $60.00.

The Impact of Surgery on Anesthesia. Wednesday, Thursday and Friday, August 5, 6 and 7. Eighteen hours. Fee: $60.00.

Development and Principles of Industrial Nursing. Thursdays, September 10 through January 28. Forty-five hours. Fee: $35.00.

Common Problems of the Foot. Friday and Saturday, September 11 and 12. Nine hours. Fee: $35.00.

Three Summer Seminars at University of California Residential Conference Center, Lake Arrowhead (all fees at Lake Arrowhead include room and board):

Pediatric Cardiology. Sunday through Wednesday, August 16 through 19. Fifteen hours. Fee: $137.50.† Guest speaker: John Lind, M.D., Stockholm, Sweden.

Emotional Problems in Office Practice. Wednesday through Sunday, August 19 through 23. Fifteen hours. Fee: $150.00.†

Seminars in Internal Medicine. Sunday through Wednesday, August 23 through 26. Fifteen hours. Fee: $137.50.†

Teaching Clinics. Thursdays, September 17 through December 10. Twenty-four hours. Fee: $50.00. (No meeting November 26.)

Clinical Traineeships—Anesthesia and Dermatology. Dates by arrangement. Minimum period—two weeks. Fee: Two weeks, $150.00; four weeks, $250.00.

Contact: Thomas H. Sternberg, M.D., Assistant Dean for Postgraduate Medical Education, U.C.L.A., Los Angeles 24. BRadshaw 2-8911, Ext. 7114.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Pediatrics. Wednesday through Saturday, June 17 through 20. Twenty-eight hours. Fee: $20.00 per day.

Fundamental Practices of Radioactivity and the Diagnostic and Therapeutic Uses of Radioisotopes. Two or three month course limited to one enrollee per month. Fee: $350.00.

Contact: Seymour M. Farber, M.D., Assistant Dean, Department of Continuing Medical Education, University of California Medical Center, San Francisco 22. MOntrose 4-3600, Ext. 665.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Morning Clinical Conferences, each Monday, Room 515. *Contact:* D. H. Pischel, M.D., Professor, Division of Ophthalmology, Stanford University School of Medicine, 2398 Sacramento St., San Francisco 15.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

Cardiac Resuscitation. Sponsored by the Los Angeles County Heart Association each Wednesday throughout the year, 4 to 6 p.m. USC Medical Research Building, Room 211, 2025 Zonal Avenue. Residents and interns

of Los Angeles County, and all armed forces medical personnel admitted without fee. Tuition for all other physicians $30.00. (Eacb session all-inclusive.)

Basic Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Physicians may register at any time and receive all 52 issues. Fifty-two weeks. Fee: $100.00.

Advance Home Course in Electrocardiography. One year postgraduate series, electrocardiogram interpretation by mail. Fifty-two issues: $85.00. Physicians may register at any time.

SPECIAL ANNOUNCEMENT: Last summer a postgraduate refresher course held in Hawaii was so successful that the USC Scbool of Medicine will offer another refresher course in Hawaii and on board the *S.S. Lurline* from July 29 to August 14. (As a time and money saver, round trip air travel is also possible July 29 to August 10.)

Dermatology and Syphilology Course. Full time, September 15 through August 15. Fee: $1000.00.

Electrocardiography, Three-Day Symposium. September 18 through 20. Twenty-one hours. Fee: $65.00.

Intensive Review of Internal Medicine. Monday through Friday, September 21 through October 2. 9 to 12:30 a.m. Forty hours. Fee: $65.00.

Bedside Clinics. Thursdays, October 8 through January 14. 7:30 to 9:30 p.m. Twenty-four hours. Fee: $65.00.

Laboratory Methods. One-Day Symposium. Friday, October 9. Seven hours. Fee: $25.00.

Alumni Homecoming Course. Recent Advances in Medicine. Thursday and Friday, November 5 and 6. Sixteen hours. Fee: $50.00.

Progress in Gastroenterology. Friday through Sunday, January 15 through 17. Twenty-one hours. Fee: $65.00.

Bedside Cardiology. Thursdays, February 4 through April 21. Fee: $65.00.‡

Dermatology Clinic, One-Day Symposium. Thursday, March 24.§

Funduscopy in Internal Medicine. Every other Tuesday, April 5 through May 31. Five 2-hour sessions.*

Ward Walks in Rare Diseases. Thursdays, April 14 through June 16.§

Contact: Phil R. Manning, M.D., Associate Dean and Director, Postgraduate Division, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles 33. CApital 5-1511.

COLLEGE OF MEDICAL EVANGELISTS

Each Six Months. Anesthesiology (6 months, full-time). Vacancy occurs each six months. Limited to 2 students. Tuition: $350.00.

Diseases and Injuries of Bones and Joints. June 29 through July 24. Four weeks full time. Tuition: $100.

1960 Alumni Postgraduate Convention. Refresher Courses, March 13 and 14 at White Memorial Hospital, 1720 Brooklyn Avenue; Scientific Assembly, March 15, 16 and 17 at Biltmore Hotel. *Contact:* Walter Crawford, Executive Secretary, 316 N. Bailey Street, Los Angeles 33, ANgelus 2-2173.

For information contact: G. E. Norwood, M.D., assistant dean and chairman, Division of Postgraduate Medicine, College of Medical Evangelists, 1720 Brooklyn Ave., Los Angeles 33. ANgelus 9-7241, Ext. 214.

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Audio-Digest Foundation, a nonprofit subsidiary of the C.M.A., offers (on a subscription basis) a series of six different hour-long tape recordings covering general practice, surgery, internal medicine, obstetrics and gynecology, pediatrics and anesthesiology. Designed to keep physicians posted on what is new and important in their respective fields, these programs survey current national and international literature of interest and contain selected highlights of on-the-spot recordings of national scientific meetings, panel discussions, symposia, and individual lectures. For information contact Mr. Claron L. Oakley, Editor, 1919 Wilshire Blvd., Los Angeles 57, HUbbard 3-3451.

*Fees to be announced.

‡Hours to be announced.

§Fees and hours to be announced.

Medical Dates Bulletin

SUMMER AND FALL MEETINGS

California Medical Association in cooperation with University of Southern California School of Medicine and Sacramento Valley County Medical Societies Postgraduate Institute. June 25 and 26. Lake Tahoe, Tahoe Tavern. Chairman: Robert H. Quillinan, M.D., 616 Alhambra Blvd., Sacramento. *Contact:* Chairman or C.M.A. office, 2975 Wilshire Blvd., Los Angeles 5, DUnkirk 5-2341.

Nevada State Medical Association, Annual Session, jointly with Reno Surgical Society, August 19 through 22, Mapes Hotel, Reno. *Contact:* Nelson B. Neff, executive secretary, P. O. Box 188, Reno.

Saint John's Hospital Postgraduate Assembly, September 10 through 12, Saint John's Hospital, Santa Monica. *Contact:* John C. Eagan, M.D., director, Postgraduate Assembly, 1328 22nd Street, Santa Monica.

Washington State Medical Association Annual Meeting, September 13 through 16, Olympic Hotel, Seattle, Washington. *Contact:* Ralph W. Neill, executive secretary, 1309 Seventh Avenue, Seattle, Wasbington.

American College of Gastroenterology. September 19 through 26. Biltmore Hotel, Los Angeles. *Contact:* Mr. Daniel Weiss, executive director, 33 W. 60th St., New York 23, New York.

Santa Barbara County Heart Association Symposium on Cardiovascular Disease. Saturday, September 19. 9:00 a.m. to 5:00 p.m. Biltmore Hotel, Santa Barbara. *Contact:* Mrs. Katherine McCloskey, executive director, 18 La Arcada Court, Santa Barbara.

Oregon State Medical Society Annual Meeting, September 23 through 25, Medford, Oregon. *Contact:* Mr. Roscoe K. Miller, executive secretary, 1115 S.W. Taylor St., Portland 5, Oregon.

Pan-Pacific Surgical Association 8th Intensive Surgical Congress, embracing all Surgical Specialties. September 28 through October 5. Honolulu, Hawaii. *Contact:* F. J. Pinkerton, M.D., director general, Suite 230, Alexander Young Building, Honolulu 13.

San Francisco Heart Association 29th Annual Postgraduate Symposium on Heart Disease. September 30, October 1 and 2, 9 a.m. to 5 p.m. daily, St. Francis Hotel, San Francisco. *Contact:* Lawrence I. Kramer, Jr., executive director, 259 Geary Street, San Francisco 2. YUkon 2-5753.

Western Industrial Medical Association, Inc. 18th Annual Meeting, held in conjunction with Third Western Industrial Health Conference, all day October 2 and 3, Statler Hotel, Los Angeles. *Contact:* A. C. Remington, M.D., medical director, AiResearch Mfg. Co., 9851 Sepulveda Blvd., Los Angeles 45.

California Society of Internal Medicine Annual Meeting, October 2 through 4, Miramar Hotel, Santa Barbara. *Contact:* Mrs. Mildred B. Coleman, executive secretary, or Clyde C. Greene, Jr., M.D., secretary-treasurer, 350 Post Street, San Francisco 8.

California League for Nursing Annual Meeting, October 8 through October 10, U. S. Grant Hotel, San Diego. *Contact:* Ruth I. Jorgensen, general director, Room 202, 465 Post St., San Francisco 2.

California Academy of General Practice 11th Annual Scientific Assembly, October 11 through 14, 9:00 a.m. to 5:00 p.m., Hotel Statler, Los Angeles. *Contact:* William W. Rogers, executive secretary, 461 Market Street, San Francisco.

American Academy for Cerebral Palsy Annual Meeting, November 30 through December 2, Statler Hotel, Los Angeles. *Contact:* Margaret H. Jones, M.D., local arrangements chairman, associate professor of pediatrics, UCLA School of Medicine, Los Angeles 24.

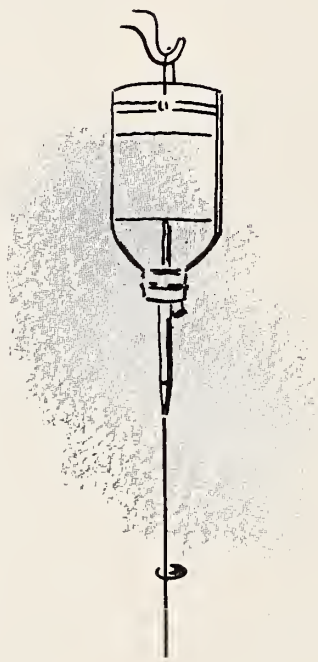
Memorial Hospital of Long Beach Medical Staff 2nd Annual Scientific Symposium "New Horizons in Medicine," to be held in conjunction with the formal opening of the new 400-bed Memorial Hospital of Long Beach. December 2nd. *Contact:* George X. Trimble, M.D., director of medical education, Seaside Memorial Hospital, 1401 Chestnut Avenue, Long Beach 13.

1960 MEETINGS

Research Study Club of Los Angeles Midwinter Clinical Conference, third week of January, Ambassador Hotel, Los Angeles. *Contact:* Norman Jesberg, M.D., secretary, 500 S. Lucas Avenue, Los Angeles 17.

California Medical Association Annual Meeting, February 21 through 24, Ambassador Hotel, Los Angeles. *Contact:* John Hunton, executive secretary, 450 Sutter Street, San Francisco 8; or Ed Clancy, director of Public Relations, 2975 Wilshire Blvd., Los Angeles 5.

Southwestern Pediatric Society Spring Lecture Series, March 1 and 2, Statler Hotel, Los Angeles. *Contact:* Wendell Severy, M.D., program chairman, 11633 San Vicente Blvd., Los Angeles 49.





THE PHYSICIAN'S *Bookshelf*

TUMORS OF THE LUNGS AND MEDIASTINUM—B. M. Fried, M.D., F.C.C.P., Associate Attending Physician, Montefiore Hospital; Associate Visiting Physician, Morrisania City Hospital, New York, New York. Lea & Febiger, Philadelphia, 1958. 467 pages, $13.50.

This monograph deals in systematic fashion with primary cancer of the lungs, rarer intrathoracic tumors and mediastinal tumors.

After chapters dealing with histiogenesis and classification, there are two chapters on etiology, one on clinical manifestations, two on metastases, two on diagnostic procedures, one on pulmonary function and two on therapy (surgical and radiological). The latter were contributed respectively by Dr. T. H. Burford, surgeon, St. Louis, and Dr. H. W. Jacox, radiologist, New York.

There are then chapters on adenoma, rare tumors, pleural tumors and a series of five chapters on mediastinal tumors and cysts.

Under classification, the author describes the usual common primary bronchial tumors (squamous cell, adenocarcinoma and undifferentiated carcinoma), but does not deal with a systematic method of *staging* such as that suggested by experienced investigators at the Third National Cancer Conference (see Proceedings, published by Lippincott, Philadelphia, 1957, pages 524 and 525). When primary bronchial carcinoma is staged in a systematic fashion, comparison of results at one institution may better be made with those at another.

The possibility of more refined preoperative diagnosis of solitary pulmonary nodules is not considered in detail, although the value of such is now recognized by many clinicians. Indeed, in the clinical section, there are some curious statements such as, "There has probably never been a case of cancer of the lung which has not been diagnosed at the outset as pneumonia" (page 90). Further, the relative proportion of solitary pulmonary tumors which are due to malignant neoplasm is based primarily on surgical-hospital material rather than on total clinical material. The author gives a percentage of approximately 29 for solitary round lesions (page 38), when extensive experiences such as those of Holin of Cleveland have shown the figure to be closer to 3 per cent.

The section on surgical treatment is well written. That on radiotherapy contains important points such as, "There is no difference in the cancericidal effects of 2000 kv., radium, cobalt 60 or 250 kv. radiation." Since the author of this section has had considerable experience with megavoltage, and since the cost of the latter to patients far exceeds that of orthovoltage radium therapy, his observation merits noting. There is, of course, no valid statistical evidence that megavoltage radiotherapy is any better for curative or palliative treatment of primary lung cancer than is orthovoltage (200 kv.).

In the section on radioactive isotope therapy, the fact that nitrogen mustard is preferable to isotopes is stressed. In the section on diagnosis there is a typographical error that merits correction: The author refers to a diagnostic dose of 300 millicuries of iodine^{131}, when of course microcuries is meant (page 180).

The author states that most observers today are of the opinion that thymoma is invariably a benign neoplasm, but does concede that some clinicians regard a few of these lesions as malignant.

In view of the increasing incidence of primary lung cancer, this monograph should be of value to practicing physicians in many disciplines. The work is well printed and illustrated, and has an adequate index.

L. Henry Garland, M.B.

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ATOMIC MEDICINE—Third Edition—Edited by Charles F. Behrens, M.D., F.A.C.R.; Rear Admiral, MC, U. S. Navy (Ret.); Roentgenologist, Yater Clinic, Washington D. C.; Consultant and Lecturer in Radiology, U. S. Naval Medical Center, Bethesda, Maryland; Formerly Director, Atomic Defense Division, Bureau of Medicine and Surgery, Navy Department; Commanding Officer, Navy Medical Research Institute, National Naval Medical Center, Bethesda, Maryland. The Williams & Wilkins Company, Baltimore, 1959. 705 pages, $15.00.

This very well written book now in its third edition contains twenty-four chapters of 705 pages. There are twenty-five contributors to this volume. The first edition was published in 1949, the second edition in 1953, and this third edition in 1959.

There are few scientific fields in which such rapid changes are being continually made as in the field of atomic medicine. This third edition has required extensive revision or rewriting of most of the previous chapters in order to attempt to keep abreast of the new changes. There is a great deal of practical information in this book both for the specialist and nonspecialist. Some of the chapters in this book contain a great deal of useful up-to-date information for all physicians concerning the fundamental biology of ionizing radiation, the pathologic anatomy of total body irradiation, the hematology of ionizing radiation, a detailed report considering the effects of acute whole body radiation injury, the diagnosis and treatment of acute radiation injury, radiation protection, survival methods in atomic disaster, and clinical methods of radio-isotope employment.

There are forty-seven pages containing much useful information concerning symbols, units and definitions, and tables regarding isotopes. Most of the chapters list numerous excellent references to which the reader can refer for additional information.

Of all the numerous publications on this subject, this one volume on *Atomic Medicine* has continued to maintain its high standards. The up-to-date, well documented material has been excellently written, well illustrated, and is one of the outstanding books in this field.

Justin J. Stein, M.D.

PROBLEMS OF ADDICTION AND HABITUATION (The Proceedings of the Forty-Seventh Annual Meeting of the American Psychopathological Association, Held in New York City, February 1957). Edited by Paul H. Hoch, M.D., New York State Psychiatric Institute; College of Physicians and Surgeons, Columbia University, New York City; and Joseph Zubin, Ph.D., New York State Psychiatric Institute; Department of Psychology, Columbia University, New York City. Grune & Stratton, New York, 1958. 250 pages, $6.50.

This volume is dedicated to California's Dr. Karl Bowman, the Samuel W. Hamilton Memorial Lecturer for 1957. Devoted to habituation in its broadest sense, it contains discussions of the use of coffee and the etiology of pica in young children as well as papers on addiction to alcohol, barbiturates, and narcotics. As is probably inevitable with coverage so broad, the contributions are diverse in approach and variable in quality. If there is a single unifying thread running through the collection, it is the idea that users of different drugs can profitably be considered as psychologically a single group. Although this hypothesis would be disputed by many, it does constitute one possible useful approach to these problems.

In the area of alcoholism Piotrowski, et al., contribute a study of self-image while Prout and his associates include this concept in a somewhat more expanded theoretical discussion based on some preliminary research. The investigations of clinical management of alcoholism are interesting, particularly the one by Tiebout. In it he discusses the reasons for the failure of classical psychoanalytic therapy in chronic alcoholism and contrasts it with the successes produced by such organizations as A. A. He makes a convincing plea for the therapeutic use of limit setting in these problems, an approach which certainly needs further study and testing.

Dr. Sandor Rado's production heads the papers more particularly devoted to narcotic addiction although his theory applies to all forms of excessive drug use. He has expanded his classical contributions to this area and reviews his current theoretical thinking here. In another paper, Dr. Robert Rasor gives a good description of the therapeutic activities at the U. S. Public Health Service Hospital, Lexington, Kentucky. Perhaps the most stimulating of the papers in this area is the one by Regan who suggests that abrupt withdrawal from narcotics accompanied by psychotherapy may facilitate rather than hinder later treatment.

The controversy concerning the best methods for controlling narcotic use in this country is considered in two articles. One is by W. Lee Speer, an official of the Federal Bureau of Narcotics, and the other is Dr. Karl Bowman's contribution. Mr. Speer argues the thesis that the incidence of addiction and of its disturbing social consequences are inversely proportional to the severity of the penalties enforced against it. His statement of his case is polemic and is less convincing for this reason. Dr. Bowman, who takes the position that the narcotic addiction problem should be in the hands of physicians rather than of law enforcement officials, argues largely by analogy from other not necessarily comparable problems. A reading of both papers suggests that the real need is for a body of experimentally verified facts concerning the results of different treatment approaches.

Also included is an important paper by Kalinowski which reemphasizes the importance of withdrawal convulsions and psychoses in cases of alcohol and barbiturate overuse. A review by Massermann succeeds in condensing twenty years of experimental work in an area of considerable interest to workers dealing with problems of addiction. The presidential address by Liddell has little to do with the theme of the book, but it is an excellent brief introduction to his important work on the experimental study of psychopathology.

This is a book of primary interest to professionals working in this field who wish to be acquainted in detail with current thinking and research. None of the contributions seem likely to become classics but most of them are well thought out and competently executed. A comment should be made about the discussions of the papers; these are stimulating and useful.

HUGH A. STORROW, M.D.

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TREATMENT IN INTERNAL MEDICINE — Harold Thomas Hyman, M.D., Diplomate of the American Board of Internal Medicine; Consulting Physician, Monmouth Memorial Hospital, Long Branch, and Riverview Hospital, Red Bank, New Jersey. Formerly Assistant Professor of Pharmacology, Columbia University; Associate Attending Physician, The Mount Sinai Hospital, New York; Attending Physician, The Montefiore Hospital, New York. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1958. 609 pages, $12.50.

The author states the purpose of his book in the preface: "A functional text planned and integrated to serve as a single volume 'office and bedside consultant' to colleagues who deal first hand with the problems of daily practice." This he has done although the book is difficult to use as a reference book and some of the facts are of questionable accuracy.

He has combined a tremendous amount of factual, theoretical and philosophical material into 582 pages, presented in a dramatic literary style, interspersed with a few illustrations which are not particularly essential for the understanding of the material. The material touches on the problems of internal medicine, physical medicine, neuropsychiatry, and nursing care and in several brief chapters on the specialized problems of pediatrics, geriatrics, obstetrics, gynecology, dermatology, ear-nose-throat, orthopedics, urology and gastrointestinal disease.

The purely pharmacological material is relatively up to date and encyclopedic in its scope with long tables listing older medications along with the latest available drugs. Thus he mentions Amphotericin B and discusses Diuril which are quite up to date. But the detailed management of specific problems is disappointing. Thus he makes no mention of the chronic management of complete heart block; he prevents atrial fibrillation with 0.2 or 0.3 gm. quinidine two or three days a week, making no mention of digitalis unless the patient is in failure, and treats malignant hypertension with lumbar puncture, phlebotomy, Diuril and Veratrum with no mention of the ganglion blocking agents.

The book is filled with pages of personal experience, generalizations and classifications of disease which differ from those commonly accepted. For instance, he differentiates between essential and aortic hypertension as two different entities. He lists among his "Ten Commandments of Cancer Prevention": (1) Don't smoke or permit smoking, (2) Do not permit the woman whose mother died of breast malignancy to nurse her female children. This latter fact may be true in some mice but has certainly never been proven in humans. Professor Hyman has documented his work with numerous reference to generally known and accepted studies, but unfortunately, fails to state the date of the publications. He uses several medical terms in a rather unusual manner, as, for instance, "hypercortinism" is used to describe treatment with cortisone or its derivatives in doses both less and more than the maintenance for an adrenalectomized patient.

In summary, the author has presented a large amount of valuable material which is at times somewhat difficult to use in the management of specific problems.

California MEDICINE

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KEY TO ABBREVIATIONS USED

(Or.)—Original Article; (Ed.)—Editorial; (CMA)—California Medical Association; (CR)—Case Report; (I)—Information; (LE)—Letters to the Editor; (MJ)—Medical Jurisprudence.

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